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COMPLEAT SYSTEM
OF THE
BLOOD-VESSELS
AND
NERVES,

TAKEN FROM
ALBINUS's Edition of *EUSTACHIUS*,
ALSO FROM
Ruysch, Vieussens, Du Verney, Haller, Trew, and J. B.
Surgeon at *Avignon*;

Beautifully Engraved on Large COPPER PLATES,
With TABLES of EXPLANATION,
Containing the Text of EUSTACHIUS, ALBINUS, &c.

TRANSLATED INTO ENGLISH.

TO WHICH ARE PREFIXED
THREE WHOLE-LENGTH ANATOMICAL FIGURES,
REPRESENTING
The External Parts of the HUMAN BODY in both SEXES.



LONDON:
PRINTED BY H. WOODFALL,
FOR JOHN AND PAUL KNAPTON. MDCCL.

COMPLETE SYSTEM

OF THE
ANATOMY OF THE
BLOOD-VESSELS

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THREE WHOLE LENGTH ANATOMICAL FIGURES,

REPRESENTING THE
FORE VIEW OF A MAN,

A N D

TWO DIFFERENT VIEWS OF A WOMAN;

Taken from *BIDLOO'S ANATOMY*,

And Enlarged to the same Size as *ALBINUS'S ANATOMICAL FIGURES* of
the BONES and MUSCLES.

TABLE I.

This table, which is taken from Bidloo, represents the fore view of the body of a man; where we may observe in general, comparing it with the next, which represents that of a woman, that besides the features being stronger or more masculine in this than in the other, the neck is not so round, the shoulders are broader, the chest is likewise more broad and prominent, the belly more compressed, the haunches narrower, and the limbs more brawny and muscular, though not so round, nor altogether so thick.

- A The head, divided into the hairy scalp; and the face 2.
- B The forehead.
- C The eye-brow.
- D The eye.
- E The ear.
- F The cheek.
- G The nose.
- H The upper lip.
- I The under lip.
- K The chin.
- L The pomum adami, or protuberant part of the larynx; which in men is much more conspicuous than in women.
- M The sternum, or breast-bone.
- NN The mammae, or breasts.
- O The scrobiculus cordis, or pit of the stomach.
- P The epigastrium.
- Q Q The hypochondria.
- R The umbilical region, in the middle of which the navel.
- S The hypogastric region.
- T T The ilia.
- U The pubes.
- V V The inguina, or groins.
- W The penis.
- X The scrotum.
- Y Y The thighs.
- Z Z The knees.
- α α The legs.
- β β The tarsus, or bending of the foot.
- γ γ The metatarsus.
- δ δ The toes.
- ε ε The shoulders.
- ζ ζ The arms.
- η η On the right side the olecranon; on the left, the bending of the fore-arm.

- θ θ The fore-arms.
- ι ι The carpus, or wrist.
- κ κ The metacarpus.
- λ λ The fingers.

TABLE II.

This table is likewise taken from Bidloo, and represents the fore view of the body of a woman; where the features are softer, the neck more round and smooth, the pomum adami less protuberant, the shoulders narrower, the chest likewise narrower and more compressed, the belly more prominent, the haunches a great deal broader, the thighs more thick and rounded, the arms, hands, legs and feet, more delicate and plump, and not so large.

The parts however which are the most characteristick of the sex, are,
A A The mammae.
B The pudendum.

TABLE III.

This third table too is taken from Bidloo, and represents the back view of the body of a woman; where the same proportions and conformation of parts in general may be observed, as in the former. What is to be remarked further in this figure, is,

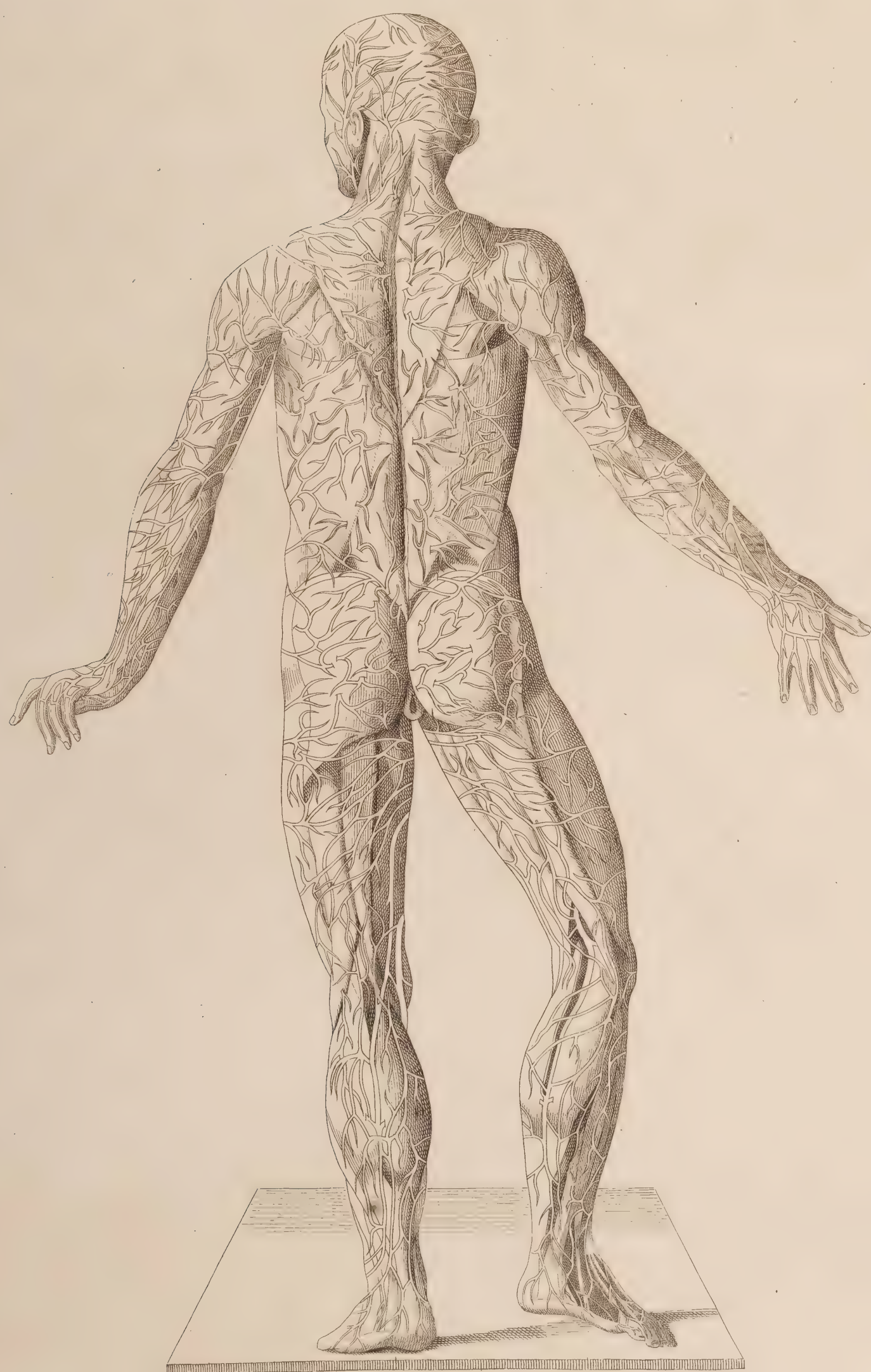
- A The vertex, or summit of the head.
- B The hind head, the hair tied up over it.
- C The temple.
- D The neck.
- E The shoulder.
- F The shoulder-blade.
- G The back.
- H The loins.
- I The buttock.
- K The thigh.
- L The ham.
- M The calf of the leg.
- N The heel.
- O The elbow.

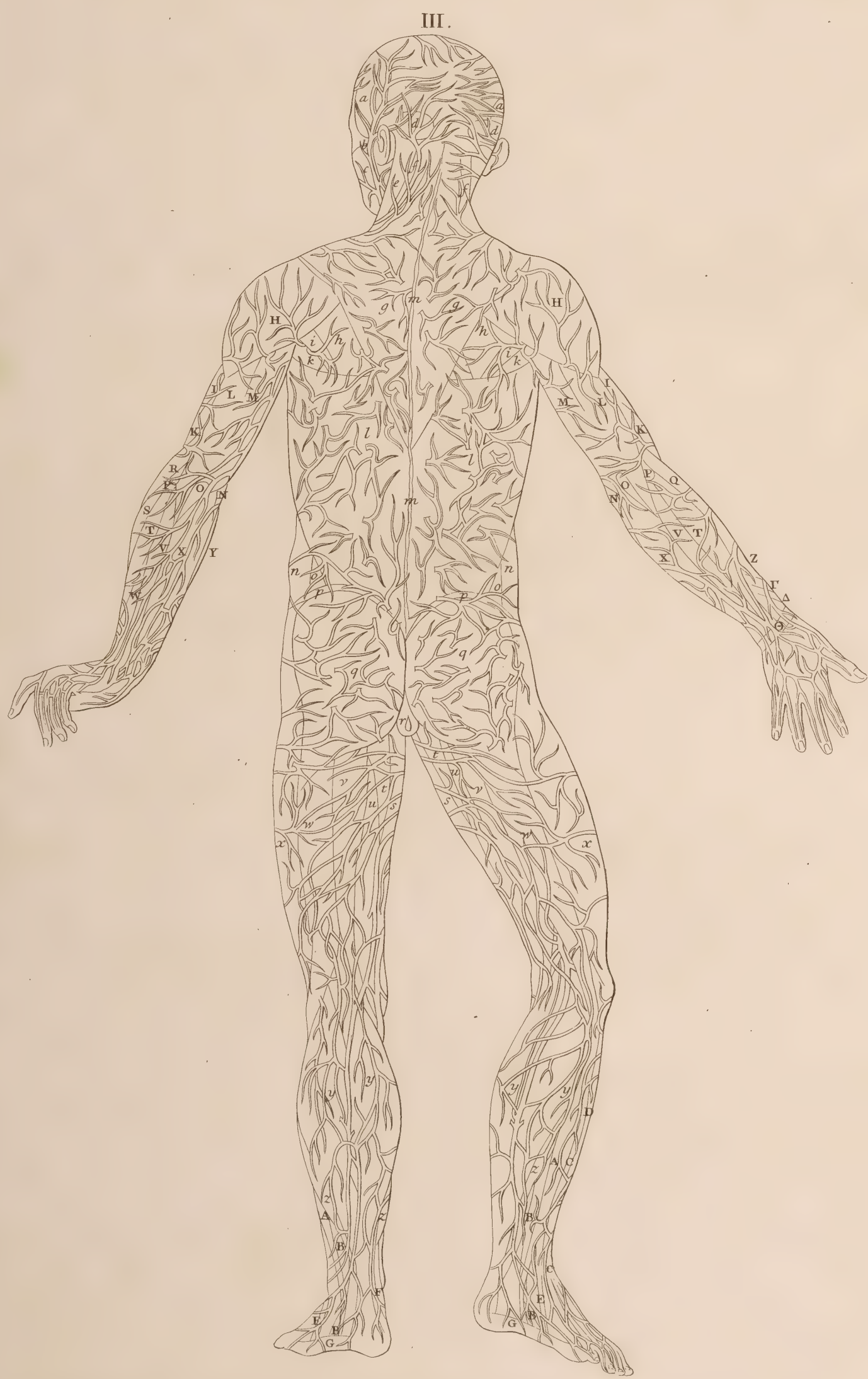
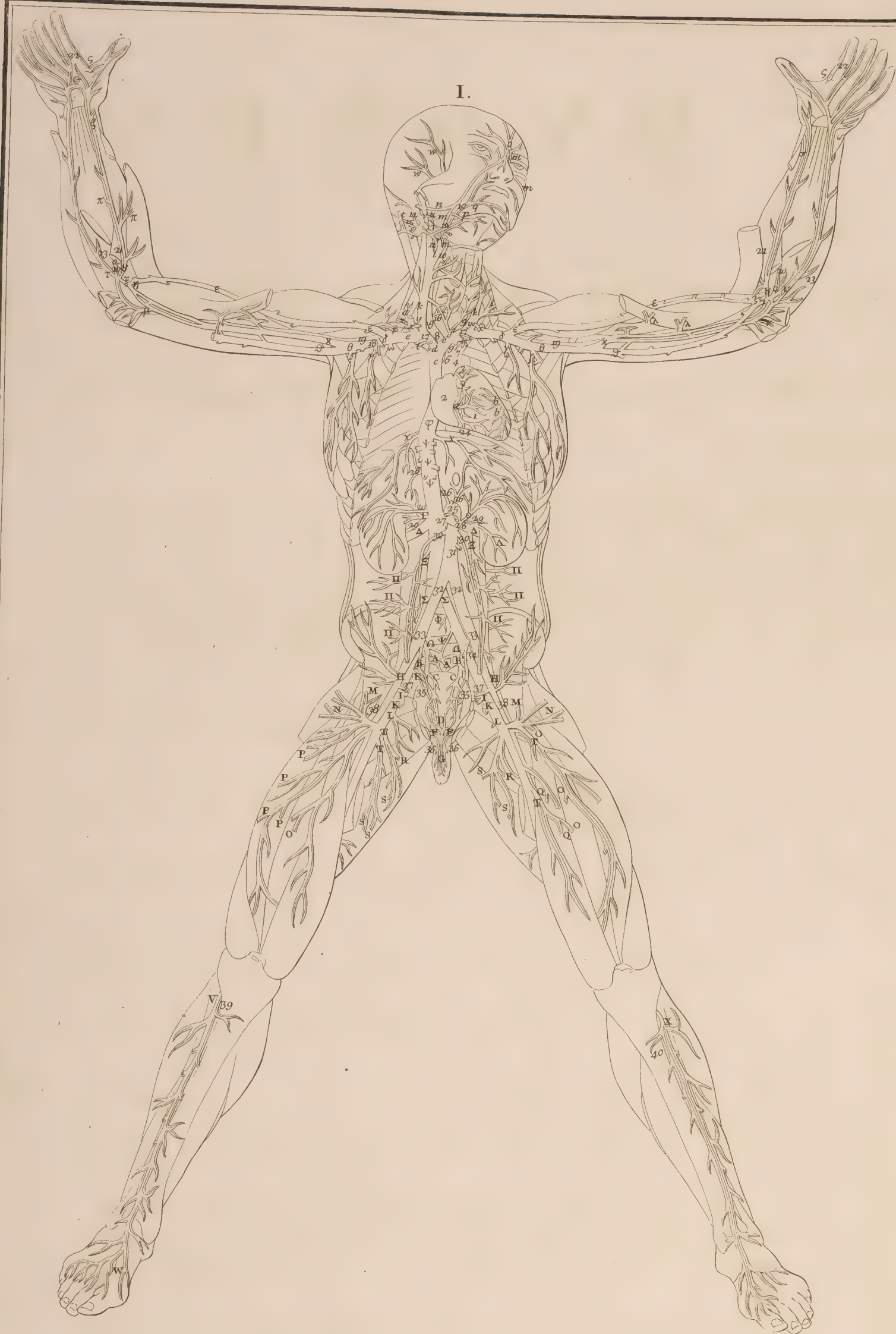
THE UNIVERSITY OF CHICAGO











COMPLEAT SYSTEM

O F T H E

BLOOD-VESSELS AND NERVES.

TABLE I.

THESE four figures are taken from Eustachius, with Albinus's text. But such parts of the text, of these, as well as of all the other figures which are taken from Eustachius, as are printed in *Italic* characters, are Eustachius's own. Fig. 1. answers to Tab. 25. N°. 2. of Eustachius. Fig. 2. to Tab. 26. N°. 2. Fig. 3. to Tab. 22. N°. 2. and Fig. 4. to Tab. 24. N°. 2.

FIGURE I.

The heart, veins, and arteries.

This first figure shews the internal veins and arteries, as also a few of the external, as they are distributed through the thorax and abdomen, and likewise amongst the muscles, bones, &c.

It appears sufficiently conspicuous in the figure, which veins are attended with concomitant arteries: this may likewise be discovered in the index of the arteries, which follows that of the veins.

- 1 The heart.
- 2 The right auricle.
- a The lesser, or right coronary vein, which joins itself with the greater one.
- b. b Branches of the greater coronary vein.
- c The vena cava superior.
- d The root of the vein r, Fig. 18. Tab. 2.
- e. e The subclavian veins, which as soon as they get to the axillæ, are called axillary.
- f The thyroid vein, which joins itself with a branch of the right internal jugular.
- g The root of the vein l, Fig. 18. Tab. 2.
- h The root of the vein n, Fig. 18. Tab. 2.
- i. i The roots of the mammary veins. See l. 1 Fig. 16. Tab. 2.
- k. k The internal jugular veins, which distribute their branches to the neck, &c.

l A branch of the internal jugular vein, which immediately divides into the veins m and r, of which

m m. m m the one, runs up under the digastric and stylohyoideus muscles, then creeps up the cheek, afterwards runs obliquely by the side of the nose to the middle of the forehead, and there, together with its fellow of the other side, it opens into the frontal vein o. But first it sends off branches to the lower part of the eye, the external parts of the nose, the greater canthus, and the eye-brow. With this vein m m, is joined the branch n of the vein v, which is a branch of the external jugular. The same vein m m produces a branch, from which arise the two veins p and q; one of which p joins itself with a branch of the vein r, running to the parts under the lower jaw; and the other q divides again into two, which are distributed to the lips. But the one which runs upon the lower lip is continued on, to join its fellow coming from the other side.

r The other branch of the vein l mounts up likewise under the digastric muscle; but first it gives off a branch, which joining with the vein p, runs to the parts under the lower jaw.

s. s Branches of the internal jugular vein, running into one, which produces the vein t, passing through the foramen, which is either in the appendix to the lambdoidal future, or near it, to the lateral sinus of the dura mater.

u A vein going from the internal jugular to the vein v, which is a branch of the external jugular, running up before the ear.

v A branch of the external jugular vein, which running up upon the outside of the sterno mastoideus muscle, afterwards runs on under the parotid gland before the ear, and passes beyond it immediately below the skin. It is lopped both above and below.

w. w Veins arising from a branch of the vein r, which runs up behind the maxilla, and afterwards distributes its branches w w to the pericranium, under the temporal muscle.

x. x The roots of the external jugular veins.

y. y The roots of the first veins which the external jugulars produce.

z A vein, which makes the one k, Fig. 4.

α A vein, which makes the one h, Fig. 4.

β A vein, which seems to run on to the lunated notch of the scapula, at the root of the coracoid process.

γ. γ Veins which run between the ferrati antichi and ferrati magni muscles.

γγ Veins which run between the latissimi dorsi and ferrati magni muscles, bestowing one branch upon the internal part of the latissimi dorsi, and the other upon the external part of the ferrati.

δ. δ The trunks of the humerary and axillary veins. Expl. Tab. 2. Fig. 19. and 20. D. d.

ε ε. ε ε The humerary veins, called by others the cephalic.

ζ The root of a common superficial vein, arising from the conjunction of a branch of the humerary ε, and the external axillary,

η A branch of the humerary vein, which at the bending of the fore-arm is joined with the axillaris profunda. Compare Expl. Tab. 2. Fig. 19. G.

θ. θ The axillary veins, called the basilic.

θ. θ The external axillary veins, Eust. de ven. com. prof. brach. antigr. w, i. e. the superficial branches of the axillary veins. They are joined by intermediate branches with x. x the axillares profundæ, but not in the same manner.

i The external axillary vein, joined at last by one branch with another of those into which the axillaris profunda is divided; and by another with a branch of the humerary, from which arises the common superficial vein ζ.

x. x The venæ axillares profundæ, which arise for the most part above the middle of the humerus, sometimes higher, and sometimes lower. Expl. Tab. 2. Fig. 19. and 20. L. C.

The axillaris profunda is usually double, and runs down on each side of the artery. Sometimes in the middle of its course its two branches join into one, then are presently divided, and afterwards united again about the bending of the fore-arm, which Vesalius was ignorant of. Expl. Tab. 2. Fig. 19. M.

The axillaris profunda, above the middle of the humerus is divided into two branches, between which the artery runs, and which join again into one about the bending of the fore-arm, not only as is seen in Tab. 2. Fig. 20: but in several different manners, none of which Vesalius has either painted or described. Expl. Tab. 2. Fig. 20. m.

He has certainly described but too superficially the deep seated branch x of the axillary vein, which about the middle of the humerus, sometimes a little lower, and sometimes higher up, is almost always divided into two branches, which running down on each side of the artery, a little below the bending of the fore-arm, are joined together again, sometimes twice, and also with a third kind of branch of the humerary vein, arising from that which constitutes the common subcutaneous vein; and after going a little further, they are again divided into three branches, one of which o, which was unknown to Vesalius, dividing into two, sends one branch (σ Fig. 2.) to creep upon the broad ligament common to the radius and ulna; and another (τ Fig. 2.) to the exterior side of the ulna, after having perforated the said ligament (μ Fig. 4.) But the other two being divided in the same manner as the artery, run down along with it to the extremity of the hand, ε. v: τ. v. De ven. comm. prof. brach. antigr. 1.

λ. λ Branches going to the biceps of the arm.

μ A branch of the vena axillaris profunda, which having passed the bending of the fore-arm, joins itself with the common vena profunda. From this branch are sent off others to the beginnings of the muscles, which arise from the internal tuberosity of the humerus, of the pronator teres, the internal radial, and the sublimis. Expl. Tab. 2. Fig. 19. and 20. N. n. compare 1 Fig. 2.

ν In the left arm, where the branch μ is wanting, and the axillaris profunda remains longer divided, those branches upon the inside of the pronator teres, the radialis internus, and the sublimis, arise separately from the same branch at the division of the axillaris profunda, from which the vein μ in the right arm arises.

The axillaris profunda at the bending of the fore-arm, gives off some branches to the beginnings of the muscles, which arise from the internal tuberosity of the humerus. Expl. Tab. 2. Fig. 19. and 20. N. n.

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§ The vena communis profunda, which seems to be divided into three branches, contrary to the opinion of Vesalius. Expl. Tab. 2. Fig. 19. and 20. P. p. Composed by the union of the axillaris profunda, and a branch from the humerary, which makes the vena communis.

o. o The veins σ. σ. Fig. 2. The middle branch of the vena communis profunda, which is neither described nor painted by Vesalius; creeping between the muscles which bend the second and third joints of the fingers, upon the whole length of the radius, and of the membranous ligament of the ulna, gives off branches to the muscles which lie upon the radius; and sometimes being double, a branch of it runs down on each side of the artery. Expl. Tab. 2. Fig. 19. and 20. S. s.

u. u Higher Branches of the venæ communes profundæ. Expl. Tab. 2. Fig. 19. and 20. R. r, which we call the radial veins: The right vein which is single, is continued to the palm of the hand, where it forms the arch ©. The branches π. π going to the supinator longus, and the musculi sublimis, are produced from it; and afterwards, before it gets to the hand, it sends off the branch g, which runs below the long abductor of the thumb and the lesser extensor, down to the back of the hand, where it makes its way through between the beginnings of the abductor and interosseus muscle of the fore-finger into the wrist, distributing its branches deep in the substance of it. But after it has entered between the beginnings of the abductor and of the interosseus muscles of the fore-finger, it sends off the branch ε, one branch of which belongs to the side of the fore-finger and the thumb, and the other to the thumb itself; and by that it joins itself with a vein arising from the arch ©.

But in the left arm he has represented the radial vein immediately divided into two, a branch running down on each side of the artery. One of these σ goes on to the back of the hand, analogous to the vein g. And of that vein σ, the one ε is a branch, the same with ε of the right hand, but belonging only to the fore-finger.

The higher branch of the vena communis profunda, running near the radius, is frequently, as well as the lower, divided into two, and going down towards the thumb under the brachial muscle which bends it, and giving off lateral branches to the neighbouring muscles, is distributed to the inside of the thumb, or fore-finger. Expl. Tab. 2. Fig. 19. and 20, R. r.

τ The lower branch of the vena communis profunda, Expl. Tab. 2. Fig. 19. and 20. Q. q, which we call the ulnar vein. In the palm it is joined to the radial u, in the form of an arch; from which arch © branches are sent off to the thumb and fingers, as is evident in the figure.

υ In the left arm, instead of one ulnar vein, there are two, and the artery runs down between them. Their origin and conjunction immediately after by an intermediate branch, appears from the figure. Their course towards the palm likewise appears, and of the branches upon it running to the thumb and fingers, otherwise than in the right hand, which shews the variety of their distribution.

The lower branch of the vena communis profunda, running near the ulna, is not always single, but sometimes dividing into two (which Vesalius takes no notice of) it runs down on each side of the artery, and going on under the muscle which is inserted into the eighth bone of the wrist, at the same time sending off branches to the neighbouring parts, is distributed to the inside of the hand, and gives off branches sometimes to all the fingers, sometimes to four, and sometimes to fewer of them. Expl. Tab. 2. Fig. 19. and 20. Q. q.

φ The vena cava inferior.

χ. χ The veins of the diaphragm.

ψ. ψ. ψ The roots of the venæ hepaticæ. See b. b. c. c. c. Fig. 10. Tab. 2.

ω A small vein arising from the right side of the vena cava above the emulgent, and distributed to the fatty membrane which covers the right kidney.

The vena cava, where it first leaves the liver on the upper part bended towards the spine, sends off a branch from the right side (but not from the left, as some authors have mentioned) which is divided into a great number of smaller ones, bestowed upon the fat which covers the right kidney, but not upon that of the left.

Γ A small vein, arising either from the cava, or from the upper part of the right emulgent; which is distributed partly to the diaphragm, partly to the right glandula renalis, and partly to the upper part of the body of the kidney.

The vena cava, near that part where the right emulgent is sent off, frequently gives off a branch to be bestowed upon the contiguous part of the diaphragm, the upper part of the substance of the right kidney, and also the glandula renalis of that side; which branch, as far as I know, has not hitherto been described by any anatomist.

Δ. Δ The emulgent veins.

It most frequently happens both in men and in monkeys, that only one vein and one artery is bestowed upon each kidney. De Ren. Cap. XV.

The veins and arteries of the kidneys seldom divide into branches, till they have entered the hollow part of the kidneys. De Ren. Cap. XVII.

Θ A small vein arising from the middle of the left emulgent on its upper part, which is distributed partly to the diaphragm, partly to the left glandula renalis, and partly to the upper part of the fat that covers the kidney.

Λ A small vein arising from the upper part of the left emulgent near the kidney, distributed to the lower part of the fat of the same kidney.

The vein which goes to the left kidney sends off branches both from its upper and lower side; from the upper side, for the most part, it produces the one Θ in the middle of its course, and the other Λ hard by the kidney. The first of these Θ sends off smaller branches to the upper part of the fat, which run down as far as the middle of the kidney, to the glandula renalis, and to the diaphragm.

These branches, which are sometimes very considerable, anastomose very beautifully with the veins of the diaphragm. But the last and superior branch Λ, is distributed to the lower part of the fat about the kidney. The emulgent vein below, about the middle of its course, produces the spermatic (Ξ of the left) which is likewise, though seldom, imitated on the right side. But it is still more seldom that we see this happen in both the emulgents together; and this is the distribution of the vessels which most frequently occurs. De Ren. Cap. XVI.

Ξ. Ξ The spermatic veins; the left of which arises from the inferior part of the left emulgent vein; and the right from the right side of the vena cava, a little below the right emulgent. The branches which they send off to the neighbouring parts appear, as also those by which they are joined with the spermatic arteries, and likewise another conjunction of the left spermatic vein with the artery of the same side. See Fig. 11. Tab. 2.

Π. Π. Π. Π. Π. Π Branches of the lumbar veins; viz. of the third, fourth, and fifth.

Σ. Σ The iliac veins.

Φ A small vein, which arising from the left iliac, is distributed to the back part of the pelvis. There are frequently two or three such found.

Ψ A vein like the former, which here joins itself with the branches of the hypogastrics.

Ω. Ω The hypogastric veins.

A. A Branches of the hypogastric veins, running upon the posterior part of the pelvis, and anastomosing with one another, and with the vein Ψ.

B. B Branches of the hypogastric veins, which go out to the buttocks by the spaces between the os sacrum and the hip bones.

C. C Branches of the hypogastric veins, running upon the fore-part of the bladder, where they are variously divided, and united together again. But about the root of the penis they run into one vein D. See g. g. k. Fig. 11. Tab. 2.

E A vein, which arising from the iliac a little below the hypogastric, runs on to the fore-part of the bladder, and joins itself with the vein C. See i Fig. 11. Tab. 2.

F. F The branches l. m Fig. 11. Tab. 2. of the hypogastric veins, which about the root of the penis unite with the vein D, whereby is produced

G A vein running upon the back of the penis. See n Fig. 11. Tab. 2.

H. H Branches of the iliac veins, which run upon the fore-part of the psoæ and internal iliac muscles.

I. I The roots of the epigastric veins, z. z Fig. 16. Tab. 2.

K. K The roots of the venæ saphenæ.

L. L The crural veins, which spread their branches upon the thighs. Their various distribution upon the two thighs is expressed.

M. M Branches going to the internal iliacs.

N. N To the tenfores vaginarum femorum.

O. O To the cruræi.

P. P. P. P. P. P To the vasti externi.

Q. Q To the vastus internus.

R. R To the short adductors of the thighs.

S. S. S. S. S To the great adductors of the thighs.

T. T. T. T These branches divide themselves into two, one running down on each side of the artery.

V The branch N Fig. 4. of the vena poplitea, which passing forwards between the tibia and fibula at the upper part of the leg, runs down upon the membrane which connects these two bones, and afterwards upon the tibia, and beyond that deep into the back part of the extremity of the foot. W A branch of it going through to the sole of the foot.

X A different distribution of the above-mentioned vein V. This immediately divides itself into two branches, one of which runs down on each side of the artery. Besides, it likewise differs in its branches from the vein V, both in the leg and the extremity of the foot.

3 The pulmonary artery.

4 The aorta.

5 The right coronary artery of the heart. It joins its branches to others of the lesser coronary vein.

Correspondent to the veins b. b are the branches of the left coronary artery.

6 The common root of the aorta, which afterwards makes the common root of the right subclavian and carotid arteries, and of the left carotid.

7 The left subclavian artery.

8 The common root of the right subclavian and carotid arteries.

9 The carotid arteries, attending the internal jugular veins k. k.

10. 10 A branch of the external carotid artery, which attends first the vein m, running up with it behind the digastric and the stylohyoideus muscles, and climbing up upon the cheek; but afterwards it attends the vein q, divides itself with it into two, and is distributed to the lips. That which runs upon the lower lip, continues itself to its fellow coming from the other side.

11 A branch of the external carotid artery; from which is produced the branch 12 going to the parts under the lower jaw, which is attended with a branch of the vein r. 13. 13 Is another branch, which runs up behind the digastric and stylohyoideus muscles, and then accompanies the vein v, and runs up with it under the skin before and above the ear. 14 Is a third branch, which makes b Fig. 4. 15 Is a fourth, which runs backwards under the trachelomastoideus, the splenius capitis, and cucullaris muscles; afterwards it perforates the cucullaris, where it rises from the cranium, and ascends by the occiput, c Fig. 4.

From the branch 13 arises another, which together with that branch of the vein r, from which the veins w. w are produced, runs up behind the lower

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lower jaw, and afterwards together with the veins w. w, is distributed to the periosteum upon the side of the cranium under the temporal muscle.

16 Is the artery 12 Fig. 2. and its branches accompany those of the vein f.

17. 17 The roots of the mammary arteries, m. m Fig. 16. Tab. 2. accompanying the roots of the mammary veins i. i.

The vein z is accompanied by the artery k Fig. 4. Do the branches of the same artery on the left side accompany those branches of the internal jugular vein, which run backwards towards the shoulder?

The vein β is attended with a branch of the subclavian artery, which appears to run on to the lunated notch of the scapula, at the root of the carocoid process.

18 An artery going to the pectoral and deltoid muscles. It joins its concomitant branch to a branch of the vein γ.

The vein γ of the left side has an artery attending it, which sinks down with it between the serratus anticus and the serratus magnus muscle.

The veins γ γ are accompanied with branches of the axillary arteries, which run down together with them between the latissimi dorsi and the serrati magni muscles, one branch belonging to the internal part of the latissimi, and the other to the external part of the serrati.

19. 19 The axillary arteries, which are afterwards called the brachials. They attend the veins θ θ. θ θ.

The veins λ. λ are attended by the arteries which go to the biceps muscle of the arm.

The veins μ. ν are attended by the same arteries, and their branches.

20. 20 The arteries 19. 19 Fig. 2. are attended by the veins ο. ο.

21. 21 The radial arteries. They attend the radial veins ς. ς.

The veins π. π are attended by the branches of the radial artery which go to the musculus sublimis and supinator longus.

The veins ϑ. σ are attended by branches of the radial arteries, which run down under the long abductors of the thumbs and the lesser extensors to the back of the hand, where they pass through between the beginnings of the abductors and the foremost interosseus muscles of the thumbs to the palm of the hand, and distribute their branches deep in the palms.

22. 22 Branches of these arteries which attend the veins ϑ. σ, which branches are sent off, after they have entered between the beginnings of the abductors and of the foremost interosseus muscles of the thumbs. They attend the veins ϑ. ϑ. But in the right hand they likewise send a branch to the thumb, as the concomitant vein ϑ does.

23. 23 The ulnar arteries, which attend the ulnar veins τ. υ. In the right arm is exhibited the ulnar artery continued into the radial in the hand in form of an arch, the same as that of the vein ϑ; from which arch are also sent off branches with the veins to the thumb and fingers.

24. 24. 25 The aorta descendens. 25 Shews the part where it leaves the diaphragm.

26. 26. 26 The phrenic arteries, which join corresponding branches to others of the phrenic veins χ. χ.

27 The root of the celiac artery.

28 The root of the upper mesenteric artery.

29. 29 The emulgent arteries. They attend the emulgent veins Δ. Δ.

30. 30 The spermatic arteries. Those branches appear by which they are united with the spermatic veins Ε. Ε, which they accompany in their course. On the left side there is likewise shewn another conjunction of the artery with the vein which attends it: See W. X Fig. 11. Tab. 2.

31 The root of the lower mesenteric artery.

32. 32 The iliac arteries, attending the iliac veins Σ. Σ.

33. 33 The hypogastric arteries, which accompany the hypogastric veins Ω. Ω.

34 The root of the left umbilical artery. The same on the right side.

Besides the hypogastric arteries send off lateral branches, which accompanying the veins B. B, go out with them to the buttocks, by the spaces between the os sacrum and the hip-bones.

35. 35 Branches of the hypogastric arteries, which run upon the fore-part of the bladder, mingled with the veins C. C.

36. 36 Branches of the same arteries, which run upon the back of the penis. See u. u Fig. 11. Tab. 2. They attend the vein G.

The veins H. H are accompanied with branches of the iliac arteries, which run upon the fore-part of the psoæ and internal iliac muscles.

37. 37 The roots of the epigastric arteries. See a. a Fig 16. Tab. 2. They accompany the roots of the epigastric veins I. I.

38. 38 The crural arteries, which, together with the concomitant crural veins L. L, distribute branches to the thighs, and accompany every where the branches of these veins M. M. N. N. &c.

39 The branch N Fig. 4. of the popliteal artery, which passing forwards between the tibia and fibula in the upper part of the leg, runs upon the membrane between these two bones, and afterwards upon the tibia, sinking down at last to the back part of the extremity of the foot. It accompanies the vein V, and produces a branch, which attending the vein W, passes through to the sole of the foot.

40 The same branch 39 of the popliteal artery, the various distribution of which is here shewn; for it differs from that on the right leg, in its branches both on the leg, and the extremity of the foot. It attends the vein X.

FIGURE II.

This figure likewise shews the internal veins and arteries, and a few of the external, as they are distributed through the thorax and abdomen, and also amongst the muscles, bones, &c. but especially the more deeply seated ones than those in the last figure; and likewise various distributions of some of those contained in the last.

From this figure likewise appears what arteries attend upon certain veins; and the same thing might be discovered in the explanation of the arteries, which I shall subjoin to that of the veins.

a The vena cava superior, cut off immediately below the origin of the vena azyga.

b The root of the vein r, Fig. 18. Tab. 2.

c. c The subclavian veins.

d The root of the vein f, Fig. 1.

e The root of the vein l, Fig. 18. Tab. 2.

f The root of the vein n, Fig. 18. Tab. 2.

g The root of the right mammary veins, l Fig. 16. Tab. 2. The same on the left side.

h. h The roots of the internal jugular veins, k. k Fig. 1.

i The root of the right external jugular vein.

k. l A double root, from which the right vertebral vein takes its origin.

m The trunk of the right vertebral vein, produced from the conjunction of the roots k and l; which it likewise shews to be united by an intermediate branch, before that conjunction. This vein together with its attendant artery 11 enters the foramen of the transverse process of the sixth vertebra of the neck, reckoning from the head.

n A branch of the right vertebral vein, climbing up without the vertebral canal.

o The left vertebral vein, which enters the foramen of the transverse process of the seventh vertebra of the neck, without being attended by any artery.

p. p Another vertebral vein, which, together with its attendant artery, enters the transverse process of the sixth vertebra of the neck.

Unless perhaps the vein (which is sometimes the case) before it enters these foramina of the transverse processes of the vertebrae, be divided into two; for then the larger branch perforates the foramen of the sixth vertebra, and the lesser that of the seventh, but the last has either no artery at all attending it, or else it is so small as not to deserve to be taken notice of: And hence I imagine it happens, that frequently the foramina of the seventh vertebra are observed to be smaller than those of the sixth: The distribution too of these vessels is likewise various in other respects. Ossium exam.

q. q The trunks of the humerary and axillary veins. Expl. Tab. 2. Fig. 19. and 20. D. d.

r. r. r. f. s Are the following observations of Eustachius to be applied here? *From the great division of the vena cava in the jugulum, is first produced the internal jugular vein, a great deal less than the external (in an ape) contrary to what it is observed in man. After this it is divided into two branches, viz. the axillary w which is the lowest, and the humerary r. r. r the highest. From the humerary is immediately produced the external jugular f, which at its origin for the most part is forked s, making a kind of foramen for the clavicle to pass through; which I thought proper to observe, not only to inform those who are less versed in anatomy, that the external jugular vein in man has no communication with the humerary, which is sent off after it, unless it is in preternatural cases; but likewise, &c. De vena comm. prof. brach. antigr. 1.*

t. t The humerary vein, commonly called the cephalic.

u. u The interior branches of the humerary veins, divided into two a little above the bending of the fore-arm; which branches being joined to others of the axillaris, make the common veins of the arm. Expl. Tab. 2. Fig. 19. and 20.

v The root of the common superficial vein. Ibid H. h.

w. w The axillary veins, commonly called the basilic.

x. x The roots of the veins γ. γ, Fig. 1.

γ The superficial branch of the vein x, joining itself with the beginning of the external axillary.

z. α Branches of the axillary vein, z going to the coracobrachialis muscle, and α to the biceps of the arm.

β. β The external axillary veins of Eust. de ven. comm. prof. brach. antigr. IV. that is, the superficial branches of the axillary veins.

γ A small branch, which joins the external axillary with the axillaris profunda.

δ Another branch, by which the external axillary joins itself with the branch 1 of the axillaris profunda.

ε The exterior branch of the external axillary vein, which is divided into two a little above the internal tubercle of the humerus. Which branch, joined with another of the humerary u, constitutes the common superficial vein v. Expl. Tab. 2. Fig. 19. and 20.

ζ Two veins, which are in the place of the axillaris profunda. They join together almost in the middle of the humerus, afterwards they divide, and at the beginning of the fore-arm unite again into one.

η The vena axillaris profunda, Expl. Tab. 2. Fig. 19. and 20. L. l. This rises about the middle of the length of the humerus. Afterwards, before it gets down to the fore-arm, it divides into two branches, which

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The vein ι is attended by a branch of the brachial artery, and likewise to the branches of the same vein are joined others going to the pronator teres, the sublimis, and flexor profundus muscle.

17 The root of the radial artery. It attends the vein π .

18. 18 The roots of the ulnar arteries. They accompany the veins ϱ . ϱ .

19. 19 The deep seated arteries of the fore-arms. They accompany the veins σ . ς . That in the left arm runs down between the two branches into which the vein divides itself.

The veins τ . τ are accompanied by branches of the last-mentioned arteries, which together with them pass through the ligament between the radius and ulna, to the outside of the arm, where they make μ . μ Fig. 4.

The vein υ is attended by a branch of the same artery passing through to the back of the fore-arm, where it makes ν Fig. 4.

20 The fifth intercostal artery of the right side, which accompanies the vein Ψ ; 21 the sixth, which attends the vein ω ; 22 the seventh, attending the vein Γ ; 23 the eighth, attending the vein Δ . The vein Θ is attended by the ninth. The vein Λ by the tenth. 24 The eleventh, attending the vein Ξ . The vein Π is attended by the twelfth.

The intercostal veins of the left side Φ . Ψ . A. B. C. D. E. G. H. I are attended by the third, fourth, fifth, sixth, seventh, eighth, ninth, tenth, eleventh, and twelfth left intercostal arteries.

The veins L. L. L. &c. are likewise attended by branches of the intercostal arteries.

25 The roots of the phrenic arteries. See 26. 26 Fig. 1.

26 The root of the celiac artery.

27 The root of the superior mesenteric artery.

28 The root of the left emulgent artery.

29 The roots of the spermatic arteries. See 30. 30 Fig. 1.

30 The root of the inferior mesenteric artery.

The lumbar veins R. R. &c. are attended by the lumbar arteries.

The veins V. V. &c. are attended by branches of the lumbar arteries which pass through to the back part of the loins.

The veins S. S. &c. are attended by branches of the same lumbar arteries, which perforate the transverse muscles of the abdomen.

31. 31 The iliac arteries, which accompany the iliac veins Q. Q.

32 An artery running upon the fore-part of the vertebrae of the loins, and of the os sacrum; which I have found arising from the posterior part of the aorta, immediately above its division into the iliacs.

33. 33 The hypogastric arteries, which attend the hypogastric veins W. W.

34. 34 The roots of the umbilical arteries.

The roots of these arteries are more plainly pointed out 35. 35 Fig. 1. there being hardly room to mark them here; but you will be able to distinguish them by comparing this with the first figure.

The veins X. X are attended by branches of the hypogastric arteries, which go out to the nates, by the spaces between the os sacrum and the hip-bones.

The vein Y. Y is attended by a branch of the left hypogastric artery, which runs out with it by a groove in the upper margin of the great foramen of the hip-bone, to the inner part of the thigh; where it first sends off branches forwards to the pectineus muscle, the short and long adductors of the thigh, and the gracilis; and backwards to the external obturator and great adductor.

The vein Z. Z is attended by the companion to that artery which attends the vein Y. Y on the left side; but here it does not arise from the hypogastric artery, but from the root of the epigastric.

The veins $\mathcal{A}$. $\mathcal{A}$ are attended by branches of the crural arteries.

The veins α . α . α . α are attended by branches of those arteries, which together with them wind round the heads of the short and long adductors of the thighs and the graciles, and run up towards the pubis upon the fore-part of the graciles.

The veins ζ . ζ . ζ are likewise attended by arteries. But in the right thigh the veins are single, running along with the arteries; whereas in the left they are double, receiving the artery betwixt them. The branches too of the veins going to the great adductors of the thighs, are likewise attended by branches of arteries going to the same muscles.

35. 35 The crural arteries, attending the crural veins $\mathfrak{Z}$. $\mathfrak{Z}$.

36. 36 The roots of the epigastric arteries.

37 This artery is the same with 39 Fig. 1. and here it runs down in the middle between two branches of the vein Θ .

38 This artery is the same with 40 Fig. 1. and here it is accompanied by the single vein ϵ . Those smaller branches which attend the larger ones in the upper part of the left leg, belong to this artery.

FIGURE III.

This figure shews the subcutaneous veins and arteries, some of which emerge from the bodies of the muscles, others between them, and others run upon the fore-part of them. Most part of the veins have no arteries accompanying them, and some are attended with arteries which are smaller than the veins. These last frequently join one another, and their different course is shewn upon the two sides; all which is sufficiently conspicuous in the figure. But although we can easily tell in a great many of them, from what branches the particular veins and arteries arise, yet there are numbers of

them where that does not so plainly appear; and as it would be but of little service if it was explained, I have not attempted it.

a a The temporal muscles.

b The zygoma.

c The masseter.

d. d The occipitales.

e. e The sternomastoidei.

f. f The places of the complexi, the splenii of the head, and the levators of the scapulæ.

g. g The cucullares.

h. h The infraspinati.

i. i The teretes minores.

k. k The teretes majores.

l. l The latissimi dorfi.

m. m. &c. The spines of the vertebrae.

n. n The external oblique muscles of the abdomen.

o. o The internal oblique muscles of the abdomen.

p. p The spines of the ossa ilia.

q. q The glutei magni.

r The external sphincter ani.

s. s The graciles.

t. t The great adductors of the thighs.

u. u The semimembranosi.

v. v The semitendinosi.

w. w The bicipites of the legs.

x. x The thicker parts of the tendinous sheaths of the thighs.

y y. y y The gemelli of the legs.

z. z. z The solei.

A. A The peronei longi.

B B. B B The peronei breves.

C. C The long extensor of the toes.

D The tibialis anticus.

E. E The peronei tertii.

F The long flexor of the toes.

G. G The abductors of the little toes.

H. H The deltoids.

I. I The internal brachials.

K. K The long supinators.

L M. L M The tricipites of the arms. The short heads L. L. The long ones M. M.

N. N The palmares longi.

O. O The olecrana.

P. P The lesser condyles of the humeri.

Q The radialis externus.

R The radialis externus longior.

S The radialis externus brevior.

T. T The common extensors of the fingers.

V. V The ulnares externi.

W The proper extensor of the little finger, or at least its situation.

X. X The ulnares interni.

Y The radialis internus.

Z. Γ The long abductor of the thumb. Z its upper part, Γ its lower.

Δ The lesser extensor of the thumb.

Θ The external ligament of the wrist.

FIGURE IV.

This figure shews the more internal veins and arteries.

a The veins and arteries running upon the periosteum under the temporal muscle, these are w. w Fig. 1.

b The artery 14 Fig. 1.

c The artery 15 Fig. 1.

d. d The veins s. s Fig. 1.

e The vein t Fig. 1.

f These branches answer to the branches of the vein d, and of the artery e in the other side, and the branch c on this side answers to the artery c of the left side; but they twist round the splenius, and not round the complexus, when the splenius is removed, as in the left side.

g A vein and artery, which perforate the splenius from within outwards.

h The continuation of the vein w Fig. 1. its ascending branches are i. i, which have no arteries accompanying them.

k A continuation of the vein and artery z Fig. 1. the vein runs on to join the vein h in the form of an arch.

l. l Veins which run down under the rhomboid muscles. m Their conjunction with the dorsal n. n. Of the branches of the vein l, one is attended with an artery, the other is not.

o. o Branches of the subclavian arteries, which accompany the veins l. l.

p. p Branches of the vein k, running upon the supraspinati muscles.

q A branch of the subclavian artery, joining itself with the vein p.

r A branch of the vein k running under the supraspinatus muscle. There is a branch on the right side which answers to it.

s Branches of a vein and artery which run backwards by the lunated notch of the scapula, at the root of the processus coracoideus, distributed under the supraspinatus muscle.

D

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t. t Branches of the axillary veins and arteries, from which arise the branches u. u, giving off v. v to the internal sides of the deltoid muscles, w. w to the internal sides of the long heads of the tricipites brachiorum: and x. x which join in with the branches δ. δ.

y. y Branches of the same veins and arteries t. t, giving off z. z. z which run under the teretes minores muscles, and afterwards perforate the infra-spinati, distributing branches between them and the scapulæ, and likewise to the infraspinati internally: α to the teres minor; β chiefly along the ferratus magnus externally; to which they give off branches.

γ. γ The axillary veins of Eustachius, which are called the basilic.

δ. δ Branches of the axillary veins, which being conjoined with the veins x. x, and then with their attendant arteries, form the branches ε. ε, ascending under the deltoid muscles; ζ. ζ to the long heads of the tricipites muscles of the arms; η. η between the short heads of the tricipites muscles and the brachii externi, running towards the fore-arm; θ. θ to the long heads of the same tricipites muscles.

ι. ι Branches of the axillary veins, which join themselves with the veins θ. θ.

* The *vena axillaris profunda* of Eustachius. This is η Fig. 2.

λ The *vena axillaris externa* of Eust. This is β Fig. 2.

μ. μ The veins and arteries τ. τ Fig. 2. running out to the external part of the fore-arms, between the short supinators and long abductors of the thumbs. Their various courses are represented in the two fore-arms. In the left they give off ascending branches, but not in the right. In the left the descending branch of the vein immediately becomes double, and betwixt these two branches the artery runs down, according to Eustachius, who says that this sometimes happens, vid. Tab. 2. Fig. 19. and 20. In the right the vein is single, attended with the artery. In the left they run further down toward the hand.

ν The vein and artery υ Fig. 2. going to the back part of the wrist.

ξ. ο. π. ς. σ. ζ. τ. υ. φ. χ. ψ. ω. Γ. Δ. Θ. Λ. Ε. Π. Σ. Φ. Ψ. Ω Branches of the intercostal and lumbar veins and arteries, making their way through the muscles, &c. to run upon the back.

A. A Branches of the hypogastric veins and arteries X. X Fig. 2. going out to the nates by the origins of the pyriform muscles, between the os sacrum and ischia. There is a variety shewn in the two sides, both as to the branches, and this other circumstance, viz. that on the right side the vein immediately splits into two, sending down a branch on each side of the artery.

B A vein arising from the branches of the hypogastric, going out between the os ischium and sacrum, and running through between the lower of the gemelli and the quadratus femoris, without any artery attending it. It joins itself at C with the vein G, a branch of the crural.

D. D Branches of the crural veins and arteries, arising from them immediately below the groins, and then perforating the muscles, &c. backwards. Here their various distributions upon the two sides appear. Upon the left side a branch of the vein E joins itself with a branch of the vein a, and on the right side the branch F unites with the vein G.

G. G Branches of the crural veins and arteries, which perforate the great adductors of the thighs backwards. Their various distributions upon the two thighs likewise appears; amongst others the trunk of the right vein immediately divides into two, a branch running down on each side of the artery. The branches which they distribute and give off to the muscles, are sufficiently conspicuous.

H The vein A, and the artery G, before they perforate the great adductor of the thigh, run down very large under the end of that muscle. Their branches are the vein and artery H, perforating the same adductor at the short head of the biceps of the leg.

I. I Veins and arteries, branches of the crurals, joining themselves in with the branches G. G.

K. K The crural veins, attended by

L. L The crural arteries.

M. M Branches of the crural veins and arteries, joining themselves to the branches G. G.

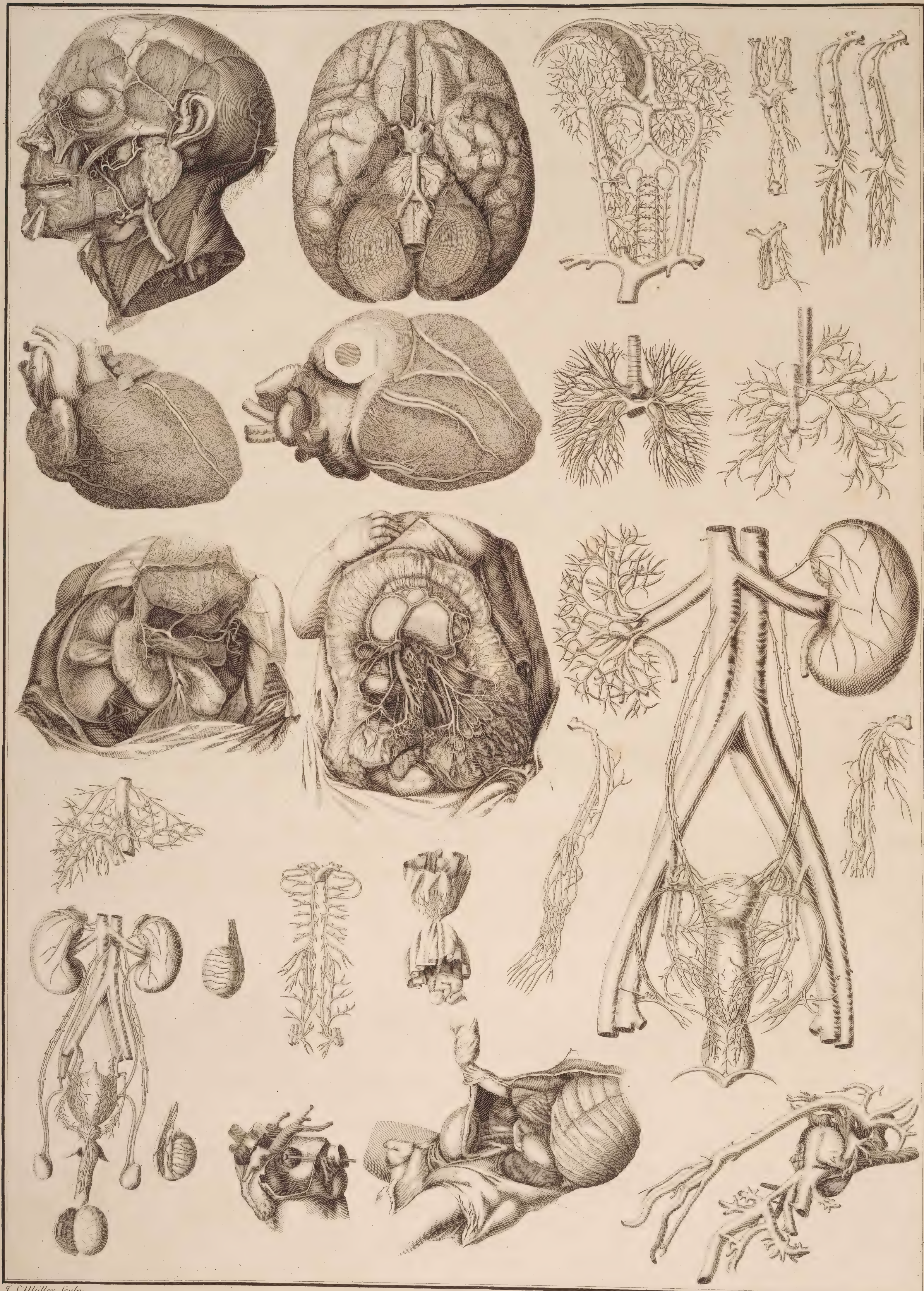
N. N Branches of the crural veins and arteries, which in the upper part of each leg, pass through between the tibiæ and fibulæ from behind forwards, where the veins make 36. and 37 Fig. 2. and the arteries 37. 38 of the same.

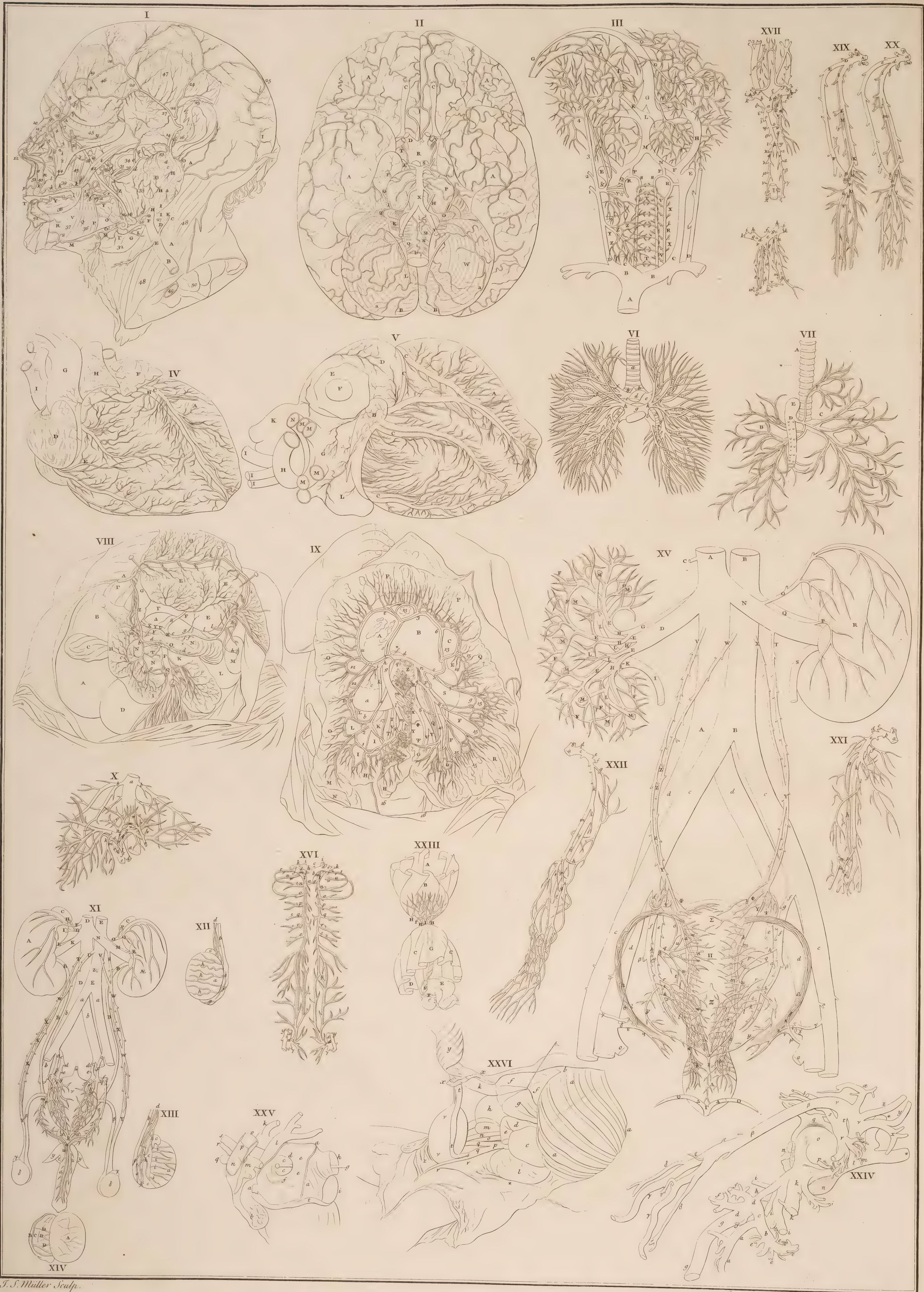
O. O The fibular veins and arteries. Their branches and various distributions appear upon the two legs. Amongst other differences, in the right leg the vein divides immediately into two branches, one of which runs down upon each side of the artery; whereas the left is single, except that near its origin it gives off a branch which attends the artery, but disappears about the middle of the thigh.

P. P The tibial veins and arteries. Their branches, together with their various distributions upon the two legs, are sufficiently conspicuous. The left vein is single, but the right immediately divides into two, accompanying one artery, which runs down betwixt them.

Q Branches of the vein and artery υ Fig. 2.







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TABLE II.

THIS table represents a system of the blood-vessels of the particular parts and viscera, including those peculiar to the fetus, and the parts of generation in both sexes. The figures are chiefly taken from Eustachius, Ruysch, Haller, and Trew.

FIGURE I.

This figure, representing the arteries of the face, is taken from Dr. Haller, Icon. Anatomic. part. corp. hum. fascic. III. Tab. 2.

- A The common trunk of the carotid.
- B The common jugular vein.
- C The internal carotid.
- D The external carotid.
- E The superior thyroid artery.
- F The lingual artery, covered by the veins and the ceratoglossus muscle.
- G The labial artery, the beginning of which is likewise covered.
- H The trunk of the external carotid, at the parotis.
- I The occipital artery, covered by the parotis and the muscles.
- K The artery of the pharynx which is here hid.
- L A superficial branch of the labial artery.
- M The submental artery.
- N Superficial branches of the labial.
- O The muscular artery of the lower lip.
- P Its anastomosis with the lower maxillary.
- Q The lower maxillary, covered with muscles, and coming out at the foramen.
- R Branches of it going to the quadratum genæ, and to the lower lip.
- S Its anastomosis with the submental.
- T Anastomosis with the coronary artery of the lower lip.
- V Anastomosis of a branch of the inferior labial artery with the coronary of the lower lip.
- Y The coronary of the lower lip.
- Z A branch of it going to the masseter and buccinator muscles.
- a A branch of it going to the skin.
- b A branch going to the musculus triangularis, and the angle of the lips.
- c A branch of the external carotid, going to the parotid gland.
- d The transverse artery of the face, arising from the temporal.
- e A branch going to the temporal muscle, and the orbicularis of the eye-lid.
- f The alveolar branch, accompanying the buccinator hardly conspicuous.
- g A branch going to the zygomatic muscle, the upper part of the parotis, the lower side of the orbicular muscle, and to the skin.
- h Branches going to the buccinator.
- i Branches going to the angles of the lips.
- k. k The coronary artery of the upper lip.
- l The lateral nasal artery produced from it.
- m Its anastomosis with the ophthalmic.
- n Another nasal artery, sending off two branches to the margin of the bone of the nose.
- o Another branch sent off to the septum narium.
- p The coronary artery of the upper lip on the right side, and its anastomosis with that on the left.
- q A branch going to the zygomatic muscle, and the root of the jugum.
- t A deep-seated branch, anastomosing at one part with the one that goes to the buccinator muscle, and at another with the infraorbital artery.
- u That anastomosis.
- x The situation of the trunk of the infraorbital artery, covered with muscles.
- y Anastomosis of a branch of the infraorbital with a branch of the temporal.
- z The anastomosis of the infraorbital with the coronary of the lips.
- 1 A branch going to the root of the nose.
- 2 An anastomosis of the infraorbital with the ophthalmic.
- 3 Another anastomosis.
- γ The lowest branch of it going to the levator communis muscle, and communicating with f.

- 4 A branch of the ophthalmic artery, running down to the levator muscle.
- 5 Another going to the alæ of the nose.
- 6 The trunk of the ophthalmic artery, coming out of the orbit.
- 7 A branch of it going to the lower eye-lid.
- 8 Another, going to the upper eye-lid, the corrugator muscle, &c.
- 9 A third, going to the space between the eye-brows.
- 10 The cutaneous branch of the ophthalmic.
- 11 One running upon the dorsum or spine of the nose.
- 12 Anastomosis of it with the nasal branches sent up from the coronary artery of the lips.
- Δ The posterior auricular artery.
- 13 A branch sent off from the temporal artery to the masseter muscle, and the parotid gland.
- 14 A deeper seated branch of the temporal artery.
- 15 The trunk of the temporal artery.
- 16 The anterior auricular artery.
- 17 The interior temporal.
- 18. 19 Its anastomosis with branches of the ophthalmic.
- 20. 21 Branches going to the forehead, temples, and sinciput.
- 22 The exterior temporal.
- 23 The superior auricular.
- 24 The sincipital arteries.
- 25 Their anastomosis with the occipital.
- 26 The facial artery.
- 27 The temporal vein.
- 28 The facial vein, climbing upwards on the face.
- 29 The frontal veins.
- Λ The ophthalmic vein.
- 30 Steno's duct.
- 31 The duct of the accessory gland.
- 32 The maxillary gland.
- 33 The parotid.
- 34 The focia parotidis.
- 35 The masseter muscle.
- 36 The triangularis.
- 37 The quadratus.
- 38 The inferior orbicular muscle.
- 39 The superior.
- 40 The nasal of the upper lip.
- 41 The buccinator.
- 42 The zygomaticus.
- 43 The common levator of the lips.
- 44 The common levator of the upper lip, and of the ala nasi.
- 45 The orbicular muscle of the eye-lid.
- 46 The frontal muscle.
- 47 The temporal.
- 48 The mastoid.
- 49 A section of the aspera arteria.
- 50 The medulla spinalis.
- 51. 52 The exact middle of each lip.

FIGURE II.

This figure is taken from Ruysch, epist. Anat. Tab. 13. It represents the brain of a boy about ten years old, inverted, and taken out of the skull; together with the course of the arteries dispersed through the pia mater, and the origin of the nerves arising from the medulla oblongata.

- A. A The surface of the inverted brain divided into four lobes, together with
- B The cerebellum.
- C The olfactory nerves with their little arteries and fibrils, which perforate the os cribriforme.

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D The optic nerves, covered with the pia mater, upon which a great many small arteries creep.

E The third pair of nerves.

F The fourth pair, or pathetic.

G The fifth pair.

H The sixth pair.

I The seventh pair, or the auditory.

K The eighth, or par vagum.

L The accessory nerves.

M The ninth pair, arising in the same manner as the other nerves which are produced from the medulla spinalis, viz. by very slender filaments or roots, which I have never seen represented in any other figure of the brain.

N The tenth pair, arising in the same manner as the former.

O A portion of the plexus choroides, rising luxuriant above the surface of the brain.

P The annular protuberance, under which creeps the medulla oblongata, covered with the pia mater, and supplied with innumerable arteries.

Q The extremity of the medulla oblongata.

R The infundibulum with its little arteries, under which are

S Two protuberances of the medulla oblongata behind the infundibulum, falsely called glands.

T The rete mirabile, produced from the carotid on each side.

V The carotid artery.

W The lamella interrupted.

X An artery called the cervical, by Dr. Vieussens.

Y The vertebral arteries.

Z Prominences of the cerebellum, which from their figure might be called vermiform processes, as justly as the true processus vermiformes.

a The cerebellum covered with the pia mater, concerning which I must observe. First, that the extremities of the small arteries are much more numerous than I could possibly here represent them. Secondly, that the subdivisions of the cortical substance could not be here represented, the brain not being previously prepared for it.

b The spinal artery, which has not always the same origin in every subject. It seldom arises precisely from the bifurcation of the cervical artery, but very frequently from the sides of the vertebral arteries, whether it passes out only at one side, or at both.

FIGURE III.

Though this figure is not quite so elegant as I could wish, yet it gives the best representation of the veins and sinuses of the brain, of any that I know hitherto published. It is taken from Tab. 12. of the cephalotomie of I. B. ---, surgeon at Avignon, published there in the year 1748.

A The trunk of the vena cava, cut off near the heart.

B The subclavian veins.

C The internal jugular veins.

D The external jugulars.

E The jugular sac, or the beginning of that vein.

F The communication of the jugular vein with the lateral sinus.

G The superior longitudinal sinus.

H The lateral sinus.

I The inferior longitudinal sinus.

K The torcular sinus of Herophilus.

L The joining of the superior longitudinal sinus, the lateral ones, the torcular of Herophilus, and the beginning of the posterior occipital sinus.

M The posterior occipital sinus.

N The inferior occipital sinus.

O The veins which terminate in the longitudinal sinus.

P The communication of the inferior occipital sinus with the vertebral sinuses.

Q The communication of the vertebral sinus with the jugular vein.

R The vertebral vein, which passes through the foramina in the transverse apophyses of the vertebrae of the neck.

S The beginning of the vertebral sinuses.

T The posterior arcade, formed by the vertebral sinuses.

V The communication of the vertebral sinuses with the vertebral veins.

X The veins which bring the blood from the neighbouring parts to the vertebral veins.

Y The trunk of the maxillary vein.

Z The different ramifications of the maxillary vein, which go to discharge their blood into the external jugular.

& The internal maxillary vein, which returns the blood from the angular vein.

1 The occipital vein.

2 The auricular vein.

3 The trunk of the temporal vein.

4 The anterior branch of the temporal vein.

5 The middle branch of the temporal vein.

6 The posterior branch of the same vein.

FIGURE IV.

This, together with the following figure, is taken from Ruysch, thesaur. Anat. 4. Tab. 3. They represent the human heart

filled with red wax, so as to shew the true course of the vessels, and the true figure of the heart and auricles.

A The human heart seen in its convex part, and in its natural situation.

B Branches of the coronary vein.

C Branches of the coronary artery.

D The right auricle.

E Branches of veins, going from the right auricle.

F The left auricle.

G The trunk of the aorta.

H The trunk of the pulmonary artery.

I The ascending trunk of the vena cava.

FIGURE V.

A A view of the plain surface of the same human heart, which rests upon the diaphragm.

B The trunk of the vena cava with its branches.

C. C. C. C Branches of the coronary artery, whose extremities, though extremely minute, are nevertheless filled with wax.

D A portion of the right auricle (for the whole of it cannot be seen in this position) through which innumerable blood-vessels are dispersed.

E A remaining portion of the diaphragm.

F The descending trunk of the vena cava, perforating the diaphragm.

G A membranous bag, which makes as it were the basis of the pulmonary vein, and a common cavity with the left auricle.

H The trunk of the aorta, from the back part of which three branches rise upwards.

I. I. I Three branches of the aorta, rising upwards.

K The ascending trunk of the vena cava.

L A portion of the left auricle.

M. M Branches of the pulmonary vein.

N One of the branches of the pulmonary artery; the other branches hardly appear when the heart is in this position.

FIGURE VI.

This figure, which represents a fore-view of the whole pulmonary system, viz. of the aspera arteria, and the pulmonary veins and arteries, is taken from Eust. Tab. 27. Fig. 13.

a The aspera arteria, cut off near the larynx.

b. b The two bronchia going to the lungs.

c. c. &c. Branches of the bronchia, distributed through the lungs.

d The pulmonary artery, cut off near the heart.

e. e Two branches, into which the pulmonary artery divides itself, going towards the lungs.

f. f. &c. Branches of the pulmonary artery, distributed through the lungs.

g The sinus of the pulmonary veins, cut off near the heart.

h. i. k. l Four pulmonary veins, arising from that sinus, and distributing their branches every where through the lungs.

FIGURE VII.

This figure is taken from Ruysch, observat. Anat. Fig. 9. and represents the aspera arteria of a calf, on the back part, freed from the substance of the lungs, and the pulmonary vein and artery, with the aorta descendens cut away from the heart, and the bronchial artery.

A The aspera arteria of a calf, viewed on the back part, and the larynx cut away.

B The right branch.

C The left.

D The bronchial artery, small branches of which accompany the bronchia to their extremities.

E The back part of the descending aorta, from which the intercostal arteries arise, cut away from the heart.

. . . . The small trunks of the intercostals, lopped off.

F The uppermost branch, which I have never seen in any animals except cows and calves.

FIGURE VIII.

This figure represents a view of the whole celiac artery, and is taken from Haller, fascic. Anat. 2. celiac. Tab. 2.

A. B The right lobe of the liver turned back.

Γ The left lobe.

Δ The little lobe of Spigelius.

C The gall-bladder.

D The right kidney.

E The stomach in such a position, as to have both its orifices turned backwards, almost in the same manner as when it is quite full.

F The cardia.

Θ A portion of the omentum.

G The pylorus.

H The descending portion of the duodenum.

I The

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I That portion of the duodenum which runs a-cross the spine, behind the mesenteric vessels.

K The termination of the duodenum in the jejunum.

L The left kidney.

M The spleen in its natural situation.

N The anterior surface of the pancreas.

O The posterior surface turned outwards.

P The mesenteric artery passing before the duodenum, and behind the pancreas.

Q The middle artery of the colon.

R The trunk of the celiac artery.

S The upper coronary artery.

Φ. Φ The mesenteric branches of the vena portarum.

T The trunk of the vena portarum in its course to the liver.

U The right branch of the celiac artery.

X Its hepatic trunk.

Y The duodenal.

Z The right gastro-epiploic artery, running along by the great curvature of the stomach.

a. a The two inferior pyloric arteries.

b The great pancreatic-duodenal artery.

c Branches going to the duodenum.

d The pancreatic artery, running a long way transversely towards the left.

e The splenic artery.

f Its pancreatic branches.

g The posterior gastric branches.

h. h The splenic branches.

i The left gastro-epiploic artery.

k Its anastomoses with the right.

l The vasa brevia.

FIGURE IX.

This figure, likewise taken from Haller, fascic. Anat. 3. art. mesenter. gives a very just and beautiful representation of the course of the mesenteric arteries.

A. B. C The whole middle part of the mesocolon turned up, so that its origin may appear.

A That part of it which respects the liver, and

B The stomach, and

C The spleen.

D The right portion of the mesocolon, and

E The left, going between the spleen and the kidney, where it is very narrow.

F. F The large left iliac flexure of the mesocolon, the membranes between the trunks of the vessels mostly cut away, in order to expose the viscera with which it is connected.

G A part of it running down to the rectum.

H A part of the ilium.

I The end of the mesentery, which is continued on with the mesocolon of the right side.

K. K The right portion of the mesentery, the membranes between mostly cut away, in order that the contiguity of the vessels below may appear.

L. L The right portion of the mesentery, dissected in the same manner.

M The cæcum.

N The appendix cæci.

O The right portion of the colon.

P Its transverse portion.

Q The left portion of it.

R The left iliac flexure of the colon.

S The left kidney.

Θ The spermatic vessels of the left side.

R The trunk of the aorta.

S The common trunk of the iliac artery.

T The external iliac artery.

Φ The last vertebra of the loins.

Ψ The pelvis, or os sacrum.

V The internal iliac artery.

X The iliac vein.

Y The arteria sacra.

Z The beginning of the jejunum, emerging from under the mesocolon which lies across it.

a The inferior transverse portion of the duodenum.

b A part of the right kidney.

c The right portion or head of the pancreas.

d Its transverse portion, lying across behind the mesocolon.

e The trunk of the vena portarum.

f The left coronary vein of the stomach.

g The mesenteric vein.

h The vena gastro colica.

i The right vena colica.

k The vena ileocolica.

l The mesenteric vein, bended in the form of an arch.

m Branches of the mesenteric vein cut off.

n The left vena colica, from which the internal hemorrhoidal is sent down.

o The ascending branch of it.

p The descending.

q The superior mesenteric artery.

r The middle artery of the colon.

s A branch going to the middle of the mesocolon lying across the back.

t Its right branch joining with the right artery of the colon.

u The right artery of the colon making an arch with the former.

x The arteria ileocolica.

y The arch which it makes with the right artery of the colon.

z A branch of it sent to the cæcum.

1 Its arch and anastomoses with the mesenteric artery.

2 Branches of the superior mesenteric artery going to the small intestines.

3 The left branch of the middle artery of the colon.

4 The left arteria colica, or inferior mesenteric.

5 Its ascending branch.

3. 6 Its conjunction with the middle artery of the colon, or *the great mesenteric arch.*

7 Branches of the same going to the colon on the left side.

8 The middle trunk of the left artery of the colon.

9 Its arch with the ascending branch of the artery of the mesocolon.

10 The inferior trunk of the left artery of the colon, or *the internal hemorrhoidal artery.*

11 Its arch with the former.

12 Double arches of the right artery of the colon.

13 Similar arches in the middle artery of the colon.

14 The same in the left.

15 Rectilinear branches running upon the intestines from the second arches.

16 The epigastric arteries.

17 The spermatic vessels.

FIGURE X.

This figure represents the vessels of the liver and gall-bladder, and is taken from Eustachius, Tab. 27 Fig. 1.

a. a The vena cava inferior, cut off both above and below the liver.

b. b. c. c. c. The hepatic veins; b. b the larger ones, c. c. c. c the lesser.

d The root of the splenic vein.

e The root of the mesenteric.

f The vena portarum.

g. h. i Three branches, into which the vena portarum divides itself, which distribute their branches through the whole substance of the liver.

k A branch of the vena portarum going to the gall-bladder.

l The hepatic artery cut off. It divides itself into two branches, which join themselves with the branches g. i of the vena portarum, and distribute their branches together with these through the liver.

m A branch of the hepatic artery going to the gall-bladder, accompanying the branch k of the vena portarum.

n The ductus choledochus cut off.

o The ductus cysticus likewise cut off.

p The ductus hepaticus.

q. r. s Three branches into which the ductus hepaticus divides itself, which accompany the three branches g. h. i of the vena portarum, and most part of the other branches which those distribute through the liver.

t. v. v. v. w Of these there can nothing certain be said.

FIGURE XI.

This figure, which represents the blood-vessels of the kidneys, the renes succenturiati, bladder, penis, and testicles, is taken from Eustachius, Tab. 12. Fig. 1.

A The right kidney is larger than Æ the left. On the upper part they are both almost equally high, but the left is a little higher, and the right on the lower part reaches farther down than the left, upon account of its larger size; wherefore the left may be said to be higher than the right.

B B. B B The ureters.

C. C The right glandula renalis, in its form, figure, and substance resembling the kidney, is larger than the left. The left renal gland is like the right, but not so large.

D. D The trunk of the vena cava.

E. E A part of the aorta.

F A small vein which arises from the right side of the vena cava above the emulgent, and is distributed to the fat upon the right kidney.

G A small vein, arising either from the cava, or from the upper part of the right emulgent; of which the branches H are bestowed upon the right glandula renalis, and the branches I upon the upper part of the substance of the kidney.

K The right emulgent vein, which is lower, shorter, and more oblique than the left.

Both in men and in monkeys there is commonly but one vein and one artery bestowed upon each kidney. De Ren. Cap. XV.

The veins and arteries of the kidneys for the most part do not divide into branches, till after they have entered the cavity of the kidneys. De Ren. Cap. XVII.

L The right emulgent artery.

M The left emulgent artery.

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N The left emulgent vein, rising higher up, longer, and less oblique than the right. The left emulgent vein sends off branches both above and below. Above, for the most part, about the middle of its course, it sends off the branch **O**, and near its insertion into the kidney, the other branch **R**. The one **O** sends off branches to the upper part of the fat upon the kidney, as far as the middle of the kidney **Q**, and the renal gland **P**, as also to the diaphragm itself; (© Tab. 1. Fig. 1.) which last are sometimes very considerable, and anastomose beautifully with the veins of the diaphragm. But the posterior and upper branch **R** is distributed to the lower part of the fat upon the kidney. The emulgent vein below, on the left side, in the middle of its course, produces the spermatic vein **S**; and the right emulgent sometimes does the same, but very seldom. But it is still seldomer to be observed in both together; and this is the distribution of these vessels, which most frequently occurs. De Ren. Cap. XVI.

O A small vein arising from the upper side of the left emulgent, in the middle of its course, and terminating partly in **P**, sent to the left glandula renalis, and partly in **Q**, which is bestowed upon the upper part of the fat upon the kidney.

R Another small vein arising from the upper side of the left emulgent near the kidney, and distributed to the lower portion of the fat upon the kidney.

S The left spermatic vein, produced from the emulgent.

T The right spermatic vein.

U. V The spermatic arteries.

W. W. W Are these the spermatic vessels connected together by the cellular membrane?

X. X. X. X Conjunctions of the spermatic arteries and veins.

Concerning those branches which the spermatic arteries and veins send off in their course, before they reach the testicles, see **E** and **30**, Tab. 1. Fig. 1.

Y. Y The spermatic chords, where the spermatic vessels are wrapped up in the cellular membrane.

Z The inferior mesenteric artery.

a. a The iliac arteries.

b. b. b The iliac veins.

c. c The hypogastric veins.

d. d. c. e The roots of the branches of the hypogastric veins, which make **A. A** Tab. 1. Fig. 1.

f. f Veins, the same with **X** Tab. 1. Fig. 2.

g. g Veins arising from the hypogastric, which run upon the bladder.

h Another vein arising from the left hypogastric, which likewise runs upon the bladder, and frequently unites its branches with those of the former one **g**. In place of this on the right side is

i A vein, which arising from the right iliac below the hypogastric, runs upon the right side of the bladder, joining itself likewise with the vein **g**.

k A considerable vein, composed of branches of the veins **g. g. h. i** united together before the prostate.

l. m Veins arising from the hypogastrics, which unite with the vein **k** at the root of the penis. From this union is composed

n An azygous vein, which runs all along the back of the penis.

o. o The hypogastric arteries.

p. p The roots of the umbilical arteries.

q. q Branches of the hypogastric arteries, which accompany the veins **f. f**: The same with those which accompany the veins **X** Fig. 2.

r. r. s. s Branches of the same hypogastric arteries, which run upon the bladder together with the veins **g. g. h. i**, and are united together by means of intermediate branches.

t u. t u Arteries which arise from the hypogastrics, and run upon the fore-part of the root of the penis; and afterwards **u. u** accompany the vein **n** upon the back of the penis.

v The bladder.

w The ligament into which the urachus is changed.

x. x The prostate.

y. y The head of the penis.

z The bulb of the urethra.

α The penis.

β. β The vasa deferentia.

γ. γ The epididymes.

δ. δ The testicles.

FIGURE XII.

This represents a view of the fore-part of the right testicle, and is taken from Eustachius, Tab. 12. Fig. 2.

a The testicle.

b The vas deferens.

c The epididymis.

d One of these appears to be the spermatic vein, and the other the artery.

e. f. g Branches running upon the vas deferens.

f A branch, which makes **f** Fig. 13.

g A branch, which makes **g** Fig. 13.

h. h. h Branches, which run upon the tunica albuginea of the testicle.

FIGURE XIII.

This represents a view of the back part of the same right testicle, and is taken from Eustachius, Tab. 12. Fig. 5.

a The testicle.

b The vas deferens.

c. c. c The epididymis.

d One of these vessels appears to be the spermatic vein, and the other the artery.

e. f. g Branches running upon the vas deferens, of which

f Makes **f** Fig. 12.

g Makes **g** of the same Fig. 12.

h. h Branches running upon the epididymis.

i. i. i. i Branches running upon the tunica albuginea of the testicle.

FIGURE XIV.

This represents the testicle with the tunica albuginea taken away. It is taken from Eustachius, Tab. 12. Fig. 6.

A The pulp of the testicle laid bare. The lines with which it is marked, seem to point out a certain division of it into different portions.

B. C The tunica albuginea. **B** Its external surface. **C** The internal, which is hollow, and contains the pulp of the testicle.

D. D. D Vessels, which go from the tunica albuginea to the substance of the testicle.

FIGURE XV.

This figure on the right side, represents the branches of the vein, artery, and ureter, distributed through the kidney; and on the left, the kidney itself, with the emulgent vein and artery, and the branches of the emulgent vein. It likewise represents the distribution of the blood-vessels on the bladder, and the parts of generation in women. It is taken from Eustachius, Tab. XIII.

A. A The inferior vena cava.

B. B The aorta.

C The root of the vein ω Tab. 1. Fig. 1.

D The right emulgent vein. The emulgent vein, after it has entered the kidney, divides itself into four or five branches **E. E. E. E. E**; which being again subdivided into several others, are variously distributed through the substance of the kidney; and being blended together, are united at **F. F. F. F. &c.** and at last terminate in very subtle and almost invisible ramifications. For if you squeeze a kidney that has been cut, there will ooze out a great many drops of blood, discovering vessels to be dispersed through the substance of the kidney, which are invisible to the sight.

G. H. H. H. H The emulgent artery, which running along with the vein of the same name, is distributed in the same manner with it.

The branches of the three systems of vessels appear, the whole substance of the kidney being destroyed.

It is usual both in men and in monkeys, for only one vein and one artery to be distributed to each kidney. De Ren. Cap. XV.

The veins and arteries of the kidneys for the most part are not divided into branches, till after they have entered the cavity of the kidneys. De Ren. Cap. XVII.

After both these vessels, running obliquely towards the kidney of the same side, have entered its cavity, as I have said above, each of them immediately divides into several branches, for the most part into four, and is distributed in a singular and surprising manner, but very different from what other authors have described, &c. --- they reach almost the middle of the length of the kidney, where their branches unite together several different ways; and being again divided into other smaller twigs, they are dispersed in the form of small capillary vessels through the substance of the liver, and at last disappear. De Ren. Cap. XVII.

The ureter (I mean in men, and not in dogs) as soon as it enters the kidney **K**, becomes a little larger **L. L. L. L. L. L.**, and is divided into three principal branches like the veins and arteries. These branches are distributed to the upper, lower, and middle part of the kidney; and the upper and lower ones are each of them divided into three other branches, but the middle one only into two. These branches are short and thick, and rather broader at their extremities, in the form of a cup, embracing the mammillæ of the kidneys, to which they adhere by way of a loose cover. It frequently happens too, that the greatest part of these branches are perforated in the middle, and there admit the mammillæ in the same manner as at their extremities. This is the distribution which most frequently occurs of the ureter through the kidneys. De Ren. Cap. XIX.

N The left emulgent vein, rising higher up, longer and less oblique than the right.

The vein which goes to the left kidney, sends off branches both above and below. Above, for the most part it sends off **O** in the middle of its course, and **P** near its entry into the kidney. The first, viz. **O**, gives off lateral branches to the upper part of the fatty membrane, as far as the middle of the kidney lengthwise, as also to the glandula renalis (**P** Fig. 11.) and likewise to the diaphragm (© Tab. 1. Fig. 1.) These branches are sometimes pretty large, and unite very beautifully with the veins of the diaphragm. The other branch **P** is bestowed upon the lower part of the fatty membrane of the kidney. This same left emulgent vein below, in the middle of its course, produces the spermatic vein **T**, which is sometimes, though seldom, imitated by the right; and it is still more seldom that we observe this in both. This is the distribution of these vessels which most frequently occurs. De Ren. Cap. XVI.

O A small vein, which arises from the upper side of the left emulgent in the middle of its course, and is distributed (partly to the diaphragm) partly to the

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the left glandula renalis, and partly to the upper portion of the fatty covering of the kidney. It makes $\odot$ Tab. 1. Fig. 1.

P A small vein, arising from the upper side of the left emulgent near the kidney, distributed to the lower portion of the fatty covering of the kidney. It makes Λ Tab. 1. Fig. 1.

Q The left emulgent artery.

R The left kidney.

S The left ureter.

T The left spermatic vein, arising almost from the middle of the lower side of the left emulgent.

V The right spermatic vein, arising from the vena cava.

W. X The spermatic arteries, arising from the fore-part of the aorta. Their branches, as well as those of the veins, which are sent off in their course to the uterus, tubæ fallopianæ, and ovaria, are here cut away. See E and 30, Tab. 1. Fig. 1.

Y. Y. Y Do these point out the conjunctions and connexions of the spermatic arteries with the veins, by means of little membranes?

Z. Z. Z Intermediate canals, by which the spermatic veins are united with the arteries.

a a. a a The spermatic veins and arteries running along the uterus and vagina. They send off a great many branches belonging to the ovaria, tubæ fallopianæ, uterus, and vagina. b. b. b Point out the veins united likewise with one another.

c c. c c The iliac arteries.

d d. d d The iliac veins.

e. e The hypogastric veins.

f f. f f The hypogastric arteries.

g The root of the umbilical artery.

h h. i. k: h. i. k Branches of the hypogastric arteries, going to the uterus, vagina, and bladder. We find their branches united with one another, as l. l. l. &c. We find them likewise united with the trunks of the spermatic arteries, as m. m. &c. They are also united with a branch of the spermatic artery as n, with a branch of the epigastric artery running along the round ligament of the womb to the uterus as o, and with a branch of the hypogastric vein as p; unless there is some fault in the engraving.

q. r. s: q. r. s Branches of the hypogastric veins, which answer to the branches h h. i. k: h. i. k of the arteries, and run along with them to the uterus, vagina, and bladder. We find them likewise frequently united together by their branches, as t. t. t. &c. as also with the trunks of the spermatic veins, as u. u. u, and with branches of the same veins, as w. w. w.

x The conjunction of the branches of the hypogastric veins, which run upon the bladder, at the fore-part of the neck of the bladder; together with the branches y. y of the hypogastrics. From which conjunction is formed the vein z, running to the clitoris.

α . α Branches of the hypogastric veins, and β . β of the arteries, running as far as the nates.

γ . γ The epigastric arteries.

δ . δ The epigastric veins.

ϵ A branch of the right epigastric vein, which immediately divides into two; one of which, ζ , runs upon the round ligament of the womb to the uterus, and the other, η , goes on to the pubes, with the extremity of that ligament.

θ A branch of the right epigastric artery, which accompanying the vein ζ , runs on to the uterus by the round ligament.

ι A branch of the left epigastric artery, which divides itself into two; one of which, κ , runs on to the uterus by the round ligament, and answers to the artery θ of the right side; and the other, λ , goes out with the extremity of the same ligament to the pubes, having none on the right side to which it answers.

μ A small vein, which soon divides into two ν and ξ , accompanying the arteries λ and κ to the pubes and uterus. It answers to the vein ϵ of the right side, but does not arise from the epigastric like the other.

$\omicron$. $\omicron$ The vena saphæna.

Γ The clitoris. Δ . Δ Its crura.

Θ . Θ The erectors of the clitoris.

Λ Part of the vagina, before the extremity of the urethra, terminated by the nymphæ.

Ξ The bladder.

Π . Σ The uterus. Π The neck. Σ The fundus.

Φ . Φ The fallopian tubes.

Ψ . Ψ The ovaria.

Ω . Ω The round ligaments of the womb.

FIGURE XVI.

This represents the subclavian veins, and the roots of the subclavian arteries, the roots of the jugular and axillary veins, and of the carotid arteries, the mammary veins and arteries, together with the intercostals, a small portion of the iliacs, the epigastric veins and arteries, and the roots of the venæ saphenæ. It is taken from Eustachius, Tab. 27. Fig. 12.

a The vena cava superior cut off near the heart.

b. b The subclavian veins,

c The root of the vein f, Tab. 1. Fig. 1.

d. d The roots of the internal jugular veins.

e. e The roots of the external jugular veins.

f. f The roots of the axillary veins.

g The aorta cut off near the heart.

h The common root of the right subclavian and right carotid artery.

i. i The roots of the carotid arteries.

k. k The roots of the subclavian arteries.

l. l The mammary veins, which unite with the epigastrics. The right divides into two, attending one artery, which runs on between them.

m. m The mammary arteries, accompanying the veins, and in like manner uniting themselves with the epigastric arteries.

n. o. p. q. r. s: n. o. p. q. r. s Branches of the mammary veins, with corresponding branches of the arteries, which join themselves with the intercostals, n. n with the first, o. o with the second, &c. They send off branches, which run through between the ribs to the breast, the roots of which only are here represented.

But when the other intercostal branches, which arise from the vena azygos, and from which the above mentioned branches are produced, have arrived near the sternum, then the branches of each vein running straight down under the sternum, meet with the other branches, and unite with them in such a manner, as each of them resembles one vein produced from a double origin. And besides, having perforated the muscles a little way from the sternum, they send off other remarkable, or at least not obscure branches, from all the spaces between the cartilages, and likewise under the sternum from the muscoli recti abdominis, which running below the skin, are variously combined and united with others, arising from the great external branch of the axillary vein. De vena sine pari, antigr. XVIII.

t. t: u. u Two of the upper intercostal veins on each side, t. t the first, u. u the second.

That venal arch, which arises from the back part of each trunk of the vena cava in the jugulum, near the origins of the jugular veins, and is reflected under the brachial artery, for the most part is divided into two branches, which being distributed through the two spaces between the upper ribs, unite with those branches of the vein of the sternum which run between the cartilages. De vena sine pari, antigr. XV.

v. v: w. w The two uppermost intercostal arteries on each side, v. v the first, w. w the second, accompanying the veins t. t: u. u.

x. x The iliac veins cut off both above and below the epigastrics.

y. y The iliac arteries cut off the same way.

z. z The epigastric veins, which unite themselves with the mammaries, and send branches to the muscoli recti abdominis, &c. The larger branches of the right one are forked, as are those of the mammary with which they are united.

α . α The epigastric arteries, accompanying the veins z. z, and uniting themselves with the mammary arteries.

β The conjunction of the larger branches of the left epigastric vein, where they are united with the branches of the mammary.

γ . γ The roots of the venæ saphenæ.

FIGURE XVII.

This figure represents the distribution of the vena azygos, the jugulars and subclavians, with the roots of the vena cava, the axillaries, intercostals, emulgents, &c. It is taken from Eustachius, Tab. 27. Fig. 6.

a The superior vena cava cut off near the heart.

b. b The subclavian veins.

c The root of the vein f, Tab. 1. Fig. 1.

d Is this the root of the vein q, Fig. 18.

e The root of the vein l, Fig. 18.

f f. f f The internal jugular veins.

g. g The external jugular veins. Their branches sent to the neck, and their conjunctions, both with one another, and with a branch of the left internal jugular, are here conspicuous.

h. h The roots of the axillary veins.

i. i: k. k The roots of the two uppermost intercostal veins on each side. t. u: t. u Fig. 16.

l. m. n The vein l, arising from the left trunk of the cava in the jugulum, is divided into two branches; one of which m, running down with the left phrenic nerve, is bestowed upon the diaphragm and mediastinum; and the other n, being reflected under the brachial artery, is joined about the fifth vertebra of the thorax, with that branch of the vena azygos, which is reflected between the sixth and seventh ribs, near their roots.

o The vena sine pari.

p The division of the vena sine pari at the eighth vertebra of the thorax, as I have sometimes observed it.

q The right, and r the left branch of the vena sine pari, which is joined with the first lumbar vein π . s of that side, arising below the emulgent.

The vena azygos, towards the eighth vertebra of the thorax p, or the tenth, is divided into two branches, viz. the right q, and the left r; these running downwards, pass the diaphragm, and each of them is inserted variously by one or more branches, either into the back part of the cava, near the origin of the emulgent vein, or into the emulgent itself, especially the left (for I do not remember that I ever observed this happen in the right) backwards, upwards, and downwards, viz. at that part where the spermatic vein is sent off, or likewise

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sometimes into the next branches $\pi. \xi$ of the veins, which arise at the top of the second vertebra of the loins. De Renib. Cap. XVI.

The last branches of the same vein (viz. the azygos) are for the most part mingled or joined with the first veins of the loins $\pi. \xi$, arising at the second of the lumbar vertebrae. De vena fine pari, antigr. XVII.

s A branch of the vena azygos, which being reflected upwards, near the roots of the ribs, supplies t the third, u the fourth, v the fifth, and w the sixth intercostal space of the left side.

Sometimes likewise the vena fine pari, towards the sixth vertebra of the thorax, sends off the branch s to the left side, which running upwards, is joined at the fifth vertebra of the same with another branch n, arising from the left jugular, and from thence it ascends as high as the third intercostal space. De vena fine pari, antigr. XIII.

x. y. z. $\alpha. \beta. \gamma$ The roots of the rest of the left intercostal veins, x of the seventh, y of the eighth, z of the ninth, α of the tenth, β of the eleventh, and γ of the twelfth.

$\delta. \epsilon. \zeta. \eta. \theta. i. \kappa. \lambda. \mu. \nu$ The roots of the right intercostal veins, δ of the third, ϵ of the fourth, &c.

ξ The trunk of the vena cava, where the emulgent arise from it.

o. o The roots of the emulgent veins.

$\pi. \xi$ The roots of the first lumbar veins, rising below the emulgent.

FIGURE XVIII.

This figure gives another view of the same vena azygos, together with the vena cava, the subclavians, the roots of the mammary, jugular, and axillary veins, as also those going to the mediastinum, pericardium, and diaphragm, and the roots of the upper hepatics. It is taken from Eustachius, Tab. 27. Fig. 3.

a Both the venæ cavæ cut off from the right auricle.

b The vena cava inferior, cut off immediately below the two superior hepatic veins.

c The vena cava superior.

d. e The subclavian veins.

f The root of the vein f, Tab. I. Fig. 1.

g. g The roots of the mammary veins. See l. l Fig. 16.

h. h The roots of the internal jugular veins.

i. i The roots of the external jugular veins.

k. k The roots of the axillary veins.

l. m. n. o. p From the left branch of the great division of the vena cava in the jugulum, hard by the internal jugular vein, there arise two branches, which running upon the mediastinum on that side of the thorax, one of them, viz. l, joins with the veins of the diaphragm m, which run up to meet it; and the other, viz. n, accompanying the left phrenic nerve, sends off the branch o to the fleshy portion of the diaphragm, while the one p communicates with the veins of the diaphragm, and is variously complicated both with the former branch, and with branches of the vein of the sternum, running upon the pleura, &c. De vena fine pari, antigr. VIII.

q A vein belonging to the left portion of the mediastinum and pericardium.

r A vein belonging to the right portion of the mediastinum and pericardium, and joining itself by its branches with the branches s. t of the right phrenic vein, which run up to meet it.

u The right phrenic vein cut off.

Of the veins of the diaphragm, and especially on the left side u, the small branches s. t belong not only to the pericardium, but likewise run up to the membranes which divide the thorax, and in several places are joined by branches of the vein of the sternum, which run upon these membranes. De vena fine pari, antigr. VIII.

v The left phrenic vein cut off.

w. w The roots of the superior hepatic veins; b. b Fig. 10.

FIGURE XIX. and XX.

These two figures shew some of the veins of the right arm, especially those which are deep-seated. They are taken from Eustachius, Tab. 8. Fig. 1. and 2.

A. a The right trunk of the vena cava in the jugulum.

B. b The root of the internal jugular vein.

C. c The root of the external jugular.

D. d The trunk of the humerary and axillary vein.

E. e The humerary vein.

F. f The division of the humerary into two branches, a little above the bending of the fore-arm; the internal of which joined with a branch of the axillary, makes the common vein of the arm.

G A branch of the above internal branch of the humerary vein, which is joined with the deep-seated axillary vein, at the bending of the fore-arm.

H. h The root of the common superficial vein of the arm.

i The axillary vein, together with the artery.

K. k The division of the axillary vein into two branches, a little above the internal tubercle of the os humeri; the external of which, joined with another branch of the humerary, makes the common superficial vein of the arm.

L. l The axillaris profunda, or deep-seated axillary vein, which for the most part arises above the middle of the length of the humerus, sometimes higher, and sometimes lower.

M The axillaris profunda, commonly double, a branch of it running down on each side of the artery. Sometimes both branches run into one, about the middle of its course, immediately dividing again, and uniting a second time at the bending of the fore-arm; which Vesalius was ignorant of.

m The axillaris profunda, above the middle of the humerus, is divided into two branches, which run down on each side of the artery, and at the bending of the fore-arm unite again into one, not only as you see it represented in the twentieth figure, but several other ways; none of which is described nor painted by Vesalius.

N. n The axillaris profunda, at the bending of the fore-arm, sends off some branches to the beginnings of the muscles, arising from the internal tubercle of the humerus; and afterwards is joined either with the branch O, sent from the humerary to form the common vein of the arm, or with o, which arises from the last mention'd vein; upon which subject Vesalius finds fault too pertly with Galen.

P. p The conjunction of the two above-mention'd veins, or the vena communis profunda; which appears to be divided into three branches, contrary to the opinion of Vesalius.

Q. q The deeper-seated branch of the vena communis profunda, running near the ulna, is not always single, but sometimes dividing into two, (which Vesalius takes no notice of) it runs down on each side of the artery, and passing under a muscle inserted into the eighth bone of the wrist, and sending off branches to the neighbouring parts, is distributed to the inside of the hand, and gives off branches, sometimes to all the fingers, sometimes to four, or fewer of them.

R. r The more superficial branch of the vena communis profunda, running near the radius, is frequently, as well as the last mentioned one, double, and going down under the long flexor muscle of the thumb, and sending off branches to the neighbouring muscles, is spent upon the inside of the thumb, or of the fore-finger.

S. s The middle branch of the vena communis profunda, which is neither described nor painted by Vesalius; running between the muscles which bend the second and third joint of the fingers, along the whole length of the radius, and the membranous ligament of the ulna, it gives off branches to the muscles lying upon these parts; and sometimes dividing into two, runs down on each side of the artery.

T. t A twig, arising at a quarter of the length of the ulna from its extremity, from the above-mentioned middle branch of the vena communis profunda; which perforating the membranous ligament of the radius and ulna, passes backwards, and is distributed to the muscles which arise from the ulna, and to others which lie upon it. This small branch, which is sometimes double, and runs down on each side of the artery, is carelessly omitted by Vesalius.

U. u An artery running along with the axillary vein.

FIGURE XXI.

This figure represents some of the veins of the right arm. It is taken from Eustachius, Tab. 27. Fig. 8.

a The vena cava superior cut off near the heart.

b. b The subclavian veins.

c The root of the internal jugular vein.

d The root of the external jugular vein.

e The axillary vein.

f. f. f Branches, which belong to the breast, the side of the thorax, &c.

g Two veins, in the place of the axillaris profunda; which being united by means of the intermediate branch h, run afterwards into the one i near the bending of the fore-arm.

k The external axillary, Eustach. de vena comm. prof. brach. antigr. IV.

l A vein supplying the place of the humerary.

I have observed this vein (viz. the humerary) to be sometimes intirely wanting; but from the external axillary, above the middle of the length of the humerus, was sent off a small branch, which running down in a winding course to the usual place, supplied that of the humerary, and near the bending of the fore-arm, was joined by one branch m, with the external axillary, and with the other (but here there are two n) with the internal, after the manner of the humerary. De vena comm. prof. brach. antigr. IV.

o The division of the axillary into two branches, a little above the internal tubercle of the humerus; the exterior of which p, being united with the other branch m of the humerary, constitutes the common superficial vein q. Expl. Fig. 19. and 20. K. k.

r The conjunction of the common superficial vein with the axillaris profunda.

s The conjunction of a branch of the common superficial vein with a branch of the external axillary.

FIGURE XXII.

This figure, representing some of the veins of the left arm, is taken from Eustachius, Tab. 27. Fig. 9.

a The vena cava superior cut off near the heart.

b The root of the right subclavian vein.

c The left subclavian vein.

d The root of the vein f, Tab. I. Fig. 1.

e The

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- e The root of the internal jugular vein.
 f The root of the external jugular vein.
I have met with the humerary vein sometimes so small, that unless I had been very intent, both with my mind and eyes, it would have altogether escaped me.
 De vena comm. prof. brach. antigr. IV.
 h The conjunction of the humerary with the trunk of the external axillary vein; i, with a branch of it.
 k The axillary vein.
 l The vena axillaris profunda.
 m The external axillary vein, Eustach. de vena comm. prof. brach. antigr. IV.
 n The conjunction of the external axillary vein, with the axillaris profunda.
 o The division of the axillary into two branches, the exterior of which, p, uniting with the branch, i, of the humerary, forms the vein, q, which is joined by another branch, r, coming from the interior branch of the division of the external axillary.
 s A branch arising from the common superficial vein, and joined with the axillaris profunda.

Besides these, are represented the superficial veins, branches of the external axillary, of the humerary, and of the common superficial; which distribute their branches, frequently united together, upon the fore-arm and hand. Those which are uppermost in the figure, running upon the internal part of the cubit; and the lowermost, upon the external part of it, and upon the hand to the extremities of the fingers.

FIGURE XXIII.

This figure, representing the human fetus and secundines, is taken from Eustachius, Tab. 14. Fig. 6.

- A. B The chorion cut open and inverted. A Its external surface, B the internal.
 C. C. D. D The amnios laid open. C. C Its external surface, D. D the internal.
 E The fetus, in the same position which it commonly has in the uterus.
 F. F. G The umbilical rope; F. F the part where it is bare, G the part where it appears through the amnios.
 H. H. H. I. I Veins and arteries from the umbilical rope ramified upon the chorion; H. H. H appear to be the veins, and I. I the arteries, if we may judge from their size and union.

FIGURE XXIV.

This figure is intended principally to shew the umbilical vein and artery, with the canalis venosus, and arteriosus, in the fetus. It is taken from Dr. Trew's dissertatio epistolica de differentiis, &c. Tab. 2. Fig. 23.

- a. a The vena portarum, running across the liver.
 b. c. d The sinus of the vena portarum, the right portion of which, b, distributes its branches e. e. e. e, through the greater or right lobe of the liver; but the left one, c, goes to the lesser or left lobe. At its entry it is enlarged into d. d, and sends off the branches f. f. f. f. Below it receives the umbilical vein g. g, and above it sends off the canalis venosus, h, which below the branches of the vena cava i. i. i. i, collected from each lobe of the liver, is joined to the trunk of the inferior or ascending vena cava k. k, with which is united the trunk of the superior or descending vena cava, l, composed of the two jugulars *, and the vena azygos or fine pari, m, both which trunks form the right auricle, n.
 o The sack of the left auricle, into which enter the branches of the right pulmonary vein, p, and of the left, q.
 r The right branch of the pulmonary artery.
 s. s The left.
 t The canalis arteriosus, arising from the pulmonary artery near its bifurcation, and united with the arch of the aorta v. v.
 x The right subclavian.
 y The right carotid.

- z The left carotid.
 α The left subclavian.
 β The descending aorta, divided at the iliac region on each side, into γ. γ The umbilical artery, and δ. δ The crural.
 ε The arteria sacra, sent off at the division of the aorta.

FIGURE XXV.

This figure represents the left auricle of the heart laid open, chiefly to shew the valve of the foramen ovale. Here likewise is laid open the canalis arteriosus. It is taken from Dr. Trew, dissert. epist. &c. Tab. 4. Fig. 61.

- a. a. a The margin of the sack of the left auricle laid open.
 b The left auricle.
 c. c The anterior part of the septum.
 d. e. e. f The posterior part of it, or the valve of the foramen ovale, covering its orifice entirely, through which at d and f the border of its anterior part appears conspicuous.
 g A small probe thrust in between the anterior and posterior part of the septum.
 h The trunk of the inferior vena cava.
 i Part of the right auricle.
 k The vena fine pari.
 l The right pulmonary artery.
 m The left.
 n The canalis arteriosus laid open.
 o The aorta descendens laid open.
 p A prominent production between the insertion of the canalis arteriosus into the descending aorta, and the great cavity of the arch of the aorta.
 q. r. s Ascending branches of the arch of the aorta.
 t The trunk of the coronary vein running to the right auricle.

FIGURE XXVI.

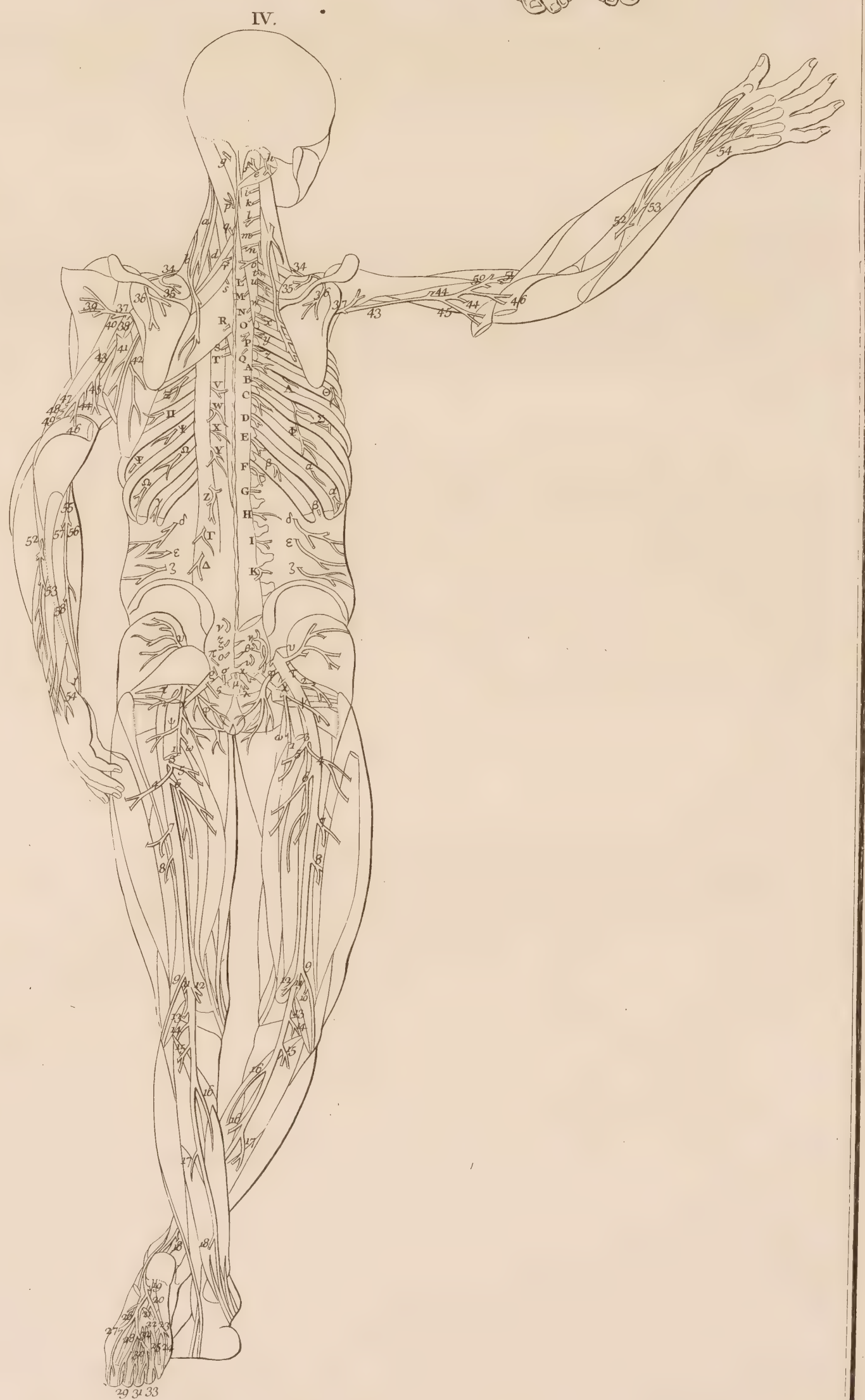
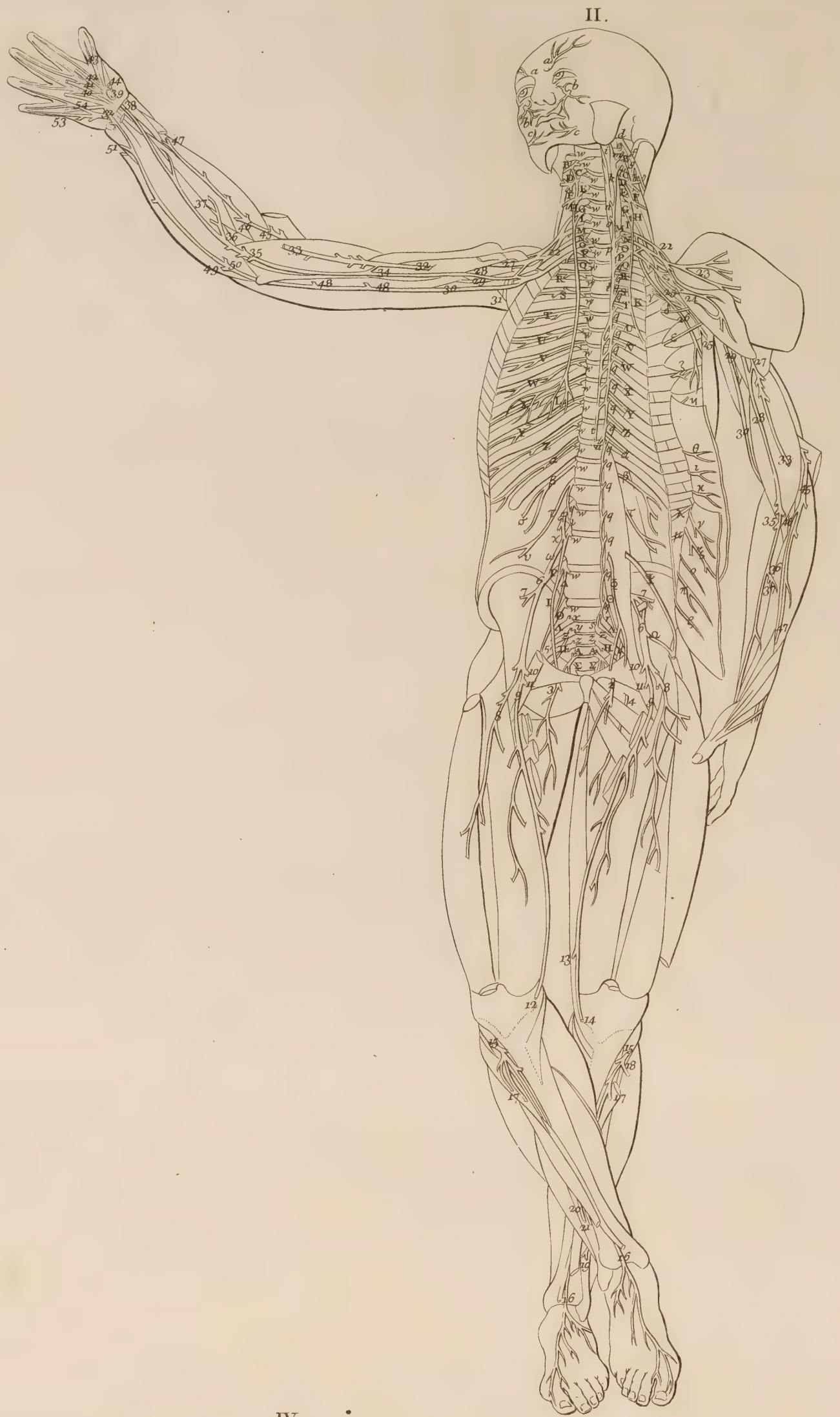
This figure is intended principally to shew the passage of the umbilical vein into the liver, and the continuation of the internal iliac artery into the umbilical. It is likewise taken from Dr. Trew, dissert. epist. &c. Tab. 5. Fig. 71.

- a. a. a The breast composed of the ribs.
 b The xyphoid cartilage.
 c The stomach.
 d The pylorus.
 e A portion of the duodenum which is cut away.
 f. f The lesser lobe of the liver, turned up in such a manner as to bring to view its concave inferior or interior surface, g.
 h A part of the lower surface of the right lobe of the liver.
 i A small portion of the fundus of the gall-bladder.
 k The umbilical vein entering the substance of the liver, between the right and left lobe.
 l The left kidney.
 m Part of the right.
 n The right ureter.
 o The inferior vena cava.
 p The extremity of the trunk of the descending aorta.
 q. q Its division into the iliac arteries.
 r. r The external iliac.
 s The internal. The continuation of which is
 t. t The umbilical artery, mounting up near the side of
 v. v The urinary bladder.
 x. x The termination of the future navel.
 y. y Part of the umbilical rope running in a spiral manner.
 z The symphysis of the os pubis.
 * The prominent spine of the os ilium.

The End of the System of the Blood-vessels.







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TABLE III.

THIS table, consisting of four figures taken from Eustachius, represents a compleat general system of the nerves.

FIGURE I.

This figure shews the subcutaneous nerves, some of which appear between the muscles, some perforate them, and some come from behind. It is taken from Eustachius, published by Albinus, Tab. 21 N^o. 2.

There is a prodigious number of nerves bestowed upon the (fat) and these, as I think I have observed in dissecting, are not so frequently inserted into the skin, as is commonly imagined; but for the most part being divided into slender fibres, terminate in the substance of the fat. De multitud. Cap. XXXIII.

a A branch of the second of the cervical nerves; a continuation of the branch f Fig. 3.

b A branch, which makes g of the same figure.

c Another branch of the second of the cervical nerves.

d The portio dura of the auditory nerves, e a branch of it going to the zygomatic muscles, f to the buccinator.

g The recurrent nerve.

h. h Branches of the third pair of cervical nerves.

i. i. i Branches of the fourth pair of cervical nerves.

k. k Branches of the first part of costal nerves.

l. l Branches of the second pair of costal nerves.

m. m Branches of the third pair of costal nerves.

n. n Branches of the fourth pair of costal nerves.

o. o Branches of the fifth pair of costal nerves.

p. p Branches of the sixth pair of costal nerves.

q. r. s. t. u. v. w. x. y. z. α. β. γ. δ. ε. ζ. η. θ. ι. κ. λ. μ. ν. ξ. ο. π. ρ. σ. τ. υ. φ. χ. ψ. ω. Γ. Δ. Θ. Λ. Ξ. Π. Σ. Φ Branches of the costal nerves, and of the first of the lumbar. Of these θ makes T Fig. 3. υ makes V, ο makes W, χ makes Y, ω makes Z, and Λ makes Γ.

Ψ. Ψ Continuations of the branches Δ. Δ Fig. 3.

Ω. Ω A continuation of the nerve Ψ Fig. 2. A makes ε Fig. 3. B makes ζ, C makes η, D makes θ, E makes ι, F makes κ.

G Is the nerve Ω Fig. 2. but there is a fault in the engraving; because it ought to be drawn joined with the nerve Ω, in the same manner as the nerve Ω is joined with the one Ψ Fig. 2.

H. I In the left thigh; continuations of branches, in which the nerve Φ Fig. 2. terminates. The same in the right thigh.

K The nerves of the penis, running along the back of it.

L. L The crural nerves. Compare 6. 6 Fig. 2.

M. M Branches of the crural nerves going to the pectinei muscles.

N. N Subcutaneous branches of the crural nerves. Of which the branches

O. O, having perforated the sartorii muscles, become subcutaneous P. P.

Q A branch of the crural nerve, which joins itself with the subcutaneous branch P.

R A branch of the crural nerve; a continuation of the branch ι Fig. 2. it perforates the sartorius, and afterwards joins itself with the nerve S.

S. S Branches of the crural nerves; continuations of the branches ι 2 and ι 4 Fig. 2. They go out between the sartorii and graciles muscles, and afterwards become subcutaneous.

T A branch corresponding to that sent off from the nerve R in the left thigh.

V A continuation of the branch β Fig. 3.

W A continuation of the branch γ Fig. 3.

X A continuation of the branch δ Fig. 3.

Y The extremity of the sciatic nerve, going to the sole of the foot.

Z A continuation of the branch π Fig. 3.

1 A continuation of the branch σ Fig. 3.

2 A continuation of the branch ς Fig. 3.

3. 4 Continuations of the branches 20 and 21 Fig. 2.

5 A continuation of the branch ο Fig. 3. It joins itself to the nerve 3, in the same manner as ξ with ς Fig. 3.

6 Answers to the nerve 23 of the right arm. Is this a variation of it?

7. 7 Doubtless 7 and 16 are branches of one trunk, the root of which is lopped Fig. 2. in the right arm, between the origins of the second of the brachial nerves 28, and of the fourth 30. But the nerves 7. 7 make ς. ς Fig. 3.

8 A branch of the second of the costal nerves, going out between the second and third rib; one of whose branches 9 belongs to the back, and makes the branch S Fig. 3. and the other 10 runs down the arm, a branch of which last 11 makes υ Fig. 3.

12 Answers to the branch 10, and makes τ Fig. 3.

13 Answers to the branch 9, and makes X Fig. 3.

14 Seems to be the nerve 25 Fig. 2.

15. 15 The trunks of the fourth pair of brachial nerves, which run behind the greater condyles, 30. 30 Fig. 2.

16. 16 Certainly 16 and 7 are branches of one trunk, the root of which is cut off Fig. 2. in the right arm, between the origins of the second of the brachial nerves 28, and of the fourth 30. But the branch 17 of those nerves 16. 16 makes ι 3 Fig. 3. the branch 18 makes ι 4, the branch 19 makes 8, and the branch 20 makes 9.

21. 21 The trunks of the second pair of brachial nerves, 28. 28 Fig. 2.

22 A branch, which the first of the brachial nerves sends off to join the second. The same with 34 Fig. 2.

23 A branch like this I have seen arising from the axillary nerves.

24. 24 Continuations of the branches ψ. ψ Fig. 3.

25 The first trunk of the brachial nerves, emerging between the biceps and brachialis internus; a continuation of the nerve 33 Fig. 2. Its branch 26 makes ι 6 Fig. 3.

27 A branch of the third trunk of the brachial nerves; a continuation of the branch 47 Fig. 2. Its branch 28 makes ι 7 Fig. 3. and the branch 29 makes ι 8 of the same figure.

33 A continuation of the branch ω Fig. 3.

31 This makes the branch 5 Fig. 3.

32 A continuation of the branch 4 Fig. 3.

33 A continuation of the branch 2 Fig. 3.

34 A continuation of the branch 3 Fig. 3.

35 A continuation of the branch 7 Fig. 3.

36 A continuation of the branch ι 1 Fig. 3.

37 Makes the branch ι 2 Fig. 3.

38 A branch of the fourth trunk of the brachial nerves; a continuation of the branch 51 Fig. 2.

FIGURE II.

This figure shews the disposition of the internal nerves with regard to the muscles, bones, &c. It answers to Tab. 19. N^o. 2. of Eustachius.

a A branch of the first branch of the fifth pair of the brain, called the ophthalmic, going out of the orbit, and winding upon the forehead. This is B Fig. 5, 3, 1. Tab. 4.

b The orbital branch of the second branch of the fifth pair of the brain, going out at the foramen below the orbit, and distributing its branches in the lower part of the face below the eye. This is H Fig. 1. Tab. 4.

c A branch of the maxillary branch of the third branch of the fifth pair of nerves of the brain, going out by a canal in the lower jaw bone by the side of the chin, and bestowing its branches upon the chin and lower lip.

As soon as this branch, together with the artery which accompanies it, has got down from the grinders to the lesser teeth, it is divided into two; one part of it emerging by a foramen at the lower lip—which in man may easily be observed by an accurate anatomist. De Dentib. Cap. XXI.

d The trunk of the eighth pair of nerves of the brain, joined together with the recurrent nerve, in the same manner as f Fig. 2. Tab. 4.

e The trunk of the eighth pair of nerves of the brain cut off.

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f The spinal recurrent nerve. g A branch of it belonging to the cleidomastoideus and sternomastoideus muscle. This is h Fig. 2. Tab. 4.

h The conjunction of the recurrent nerve, with the third of the cervical nerves. This is i Fig. 2. Tab. 4. Afterwards the recurrent winds itself backwards, see a Fig. 4.

i. i. i The left intercostal nerve.

k The upper cervical ganglion of the intercostal nerve.

l A branch of the second cervical nerve, going to join the ganglion k.

m A branch of the first cervical nerve, going to the same ganglion k.

n. o Branches from the cervical nerves, going to the intercostal nerve.

p The ganglion of the intercostal nerve in the upper part of the thorax. I have not added any notes to those which follow, as they appear plain at first sight.

q. q. &c. Branches, by which the intercostal nerve is conjoined with the spinal nerves; viz. by the seventh and eighth of the cervical, and all the costal and lumbar. Of which those that connect it with the lowest of the costal and the succeeding four of the lumbar, pass through the great psoas muscle.

r. s The extremity of the intercostal nerve, belonging to the first nerve r, and the second s of the os sacrum.

t A considerable nerve, arising from the intercostal near the vertebræ of the back; here indeed it has six beginnings, according to those branches by which the intercostal is joined with the fourth, fifth, sixth, seventh, eighth, and ninth dorsal. This is $\omega\omega$ Fig. 2. Tab. 4. which nerve, here cut off, passes through the diaphragm into the abdomen, where it joins itself with the eighth pair of nerves of the brain, and with other branches of the intercostal nerve, &c. See Tab. 4. Fig. 2.

u A branch of the intercostal nerve. $\odot$ Fig. 2. Tab. 4.

w. w. &c. Branches, by which the right intercostal nerve is joined with the spinal nerves. See $\phi. \phi.$ &c. Fig. 2. Tab. 4.

x. y Those branches of the right intercostal, which r. s represent of the left.

z. z Branches, represented by 6 Fig. 2. Tab. 4.

A. A Branches, represented by 7 Fig. 2. Tab. 4.

B. B The second pair of cervical nerves.

C. C Branches, by which the second pair of cervical nerves is joined with the third.

D. D The third pair of cervical nerves.

E. E Branches, by which the third pair of cervical nerves is joined with the fourth.

F. F The fourth pair of cervical nerves.

G. G The fifth pair of cervical nerves.

H I K. H I K L The phrenic nerves, arising by two originations, the one H from the fourth cervical pair, and the other I from the fifth. K. K Their trunks, the left of which, upon account of the point of the heart's being turned to the left side, is bended towards the left. L The extremity of the right, branched out upon the diaphragm. See 24. 25. 26. 27: 24. 25. 26. 27. Fig. 2. Tab. 4.

M. M The sixth pair of cervical nerves.

N. N The seventh pair of cervical nerves.

O. O The eighth pair of cervical nerves.

P. P Branches of the first pair of dorsal nerves, going to join the eighth pair of cervicals. Compare 29. 29 Fig. 2. Tab. 4.

Q. R. &c. The costal branches of the dorsal nerves, which run according to the length of the ribs. Q. Q The first, R. R the second, S. S the third, T. T the fourth, U. U the fifth, V. V the sixth, W. W the seventh, X. X the eighth, Y. Y the ninth, Z. Z the tenth, $\alpha. \alpha$ the eleventh, $\beta. \beta$ the twelfth. The eleventh on the left side penetrate the internal intercostal muscles, which being removed on the right, the distribution of their branches between the internal and external intercostal muscles appears. They send off branches, some of which belong to the intercostal muscles, and others are distributed to the external parts. But the twelfth run first behind the great psoas muscles, and then upon the internal part of the quadrati lumborum and the transversi abdominis, as is shewn in the left side.

γ Does this belong to the first pair of costal nerves?

δ A branch of the second costal nerve, which passes through the external intercostal muscle, immediately under the origin of the serratus magnus, which proceeds from the second rib; afterwards it bends itself backwards according to the direction of the origin of the above serratus, and then distributes itself upon the outside of the latissimus dorsi under the skin.

ϵ A similar branch of the third costal nerve, passing through in the same manner, and distributed as the former.

ζ A similar branch of the fourth costal nerve, which when it has got under the skin, winds partly backwards, and partly forwards and downwards.

η A similar branch of the fifth costal nerve, which passes first through the external intercostal muscle, then through the head of the external oblique, that part of it which rises from the fifth rib, and afterwards runs along under the skin.

$\theta. \iota. \kappa$ Branches of the seventh θ , the eighth ι , and the ninth costal nerve κ , distributed to the internal part of the external oblique muscle of the abdomen.

λ A branch of the tenth costal nerve, which after having passed through the external intercostal muscle and the transverse, runs forwards between the transverse and internal oblique muscles towards the rectus muscle, and passes through it likewise by the aponeuroses of the oblique muscles to the parts below the skin.

μ A branch of the eleventh costal nerve, which follows the same course with that of the tenth, λ .

ν A branch of the tenth costal nerve, bestowed upon the inside of the internal oblique muscle.

ξ A branch of the eleventh costal nerve, bestowed the same way as the last, ν .

$\circ. \pi$ These appear to be branches of the twelfth costal nerve, running between the transverse and internal oblique muscles.

ς This seems to be a branch of the first pair of lumbar nerves, running likewise between the transverse and internal oblique muscles.

$\sigma. \sigma$ Branches of the twelfth pair of costal nerves, which passing through the transverse muscles of the abdomen, make $\delta \epsilon. \delta \epsilon$ Fig. 4. and running forwards, appear to be the branches, $\sigma. \pi$.

$\tau. \tau$ The first pair of lumbar nerves.

υ A branch of the first pair of lumbar nerves, which passing through the transverse muscle of the abdomen, makes ζ Fig. 4. and running forwards, appears to be the branch, ϵ .

ϕ The second pair of lumbar nerves. Its two branches which are lopped, make the roots of the nerve, Ψ .

χ The second of the lumbar nerves joins with the third, and with the upper root of the nerve ι .

Ψ A nerve, marked Φ on the left side, arising here by a double origin, one from the first pair of lumbar nerves, and the other from the second.

ω The third of the lumbar nerves.

Γ The fourth of the lumbar nerves.

Δ A branch, which is sent from the fourth pair of lumbar nerves to join the sciatic.

$\Theta. \Theta$ The fifth pair of lumbar nerves.

$\Lambda. \Lambda$ The first pair of nerves of the os sacrum.

$\Xi. \Xi$ The second pair of nerves of the os sacrum. That on the right side is joined by an intermediate branch with the third.

$\Pi. \Pi$ The third pair of nerves of the os sacrum.

$\Sigma. \Sigma$ The fourth pair of nerves of the os sacrum.

Φ A nerve, whose origin is marked Ψ on the left side, emerging from the great psoas muscle, and going down along with it into the groin, being first however divided into two branches, which become subcutaneous, H. I Fig. 1. in the left thigh.

Ψ A nerve, which arises by a double origin from the second lumbar nerve ϕ , where its roots are cut through. This nerve is marked Ω Fig. 1.

Ω A branch of the crural nerve, which is conjoined into one with the nerve, ψ . This is marked G Fig. 1.

1. 1 A considerable nerve on each side, which arising by two roots, the one from the second and third, and the other from the fourth of the lumbar nerves, runs down first under the great psoas muscle, then by the side of the pelvis to the upper part of the great foramen of the coxendix, where it divides into two branches, the anterior, 2, and the posterior, 3.

2 The anterior, goes out immediately above the obturator muscle by a sinus, in the upper part of the great foramen of the coxendix; afterwards it runs down under the pectineus and adductor longus of the thigh, first contiguous to the obturator externus, then to the adductor brevis of the thigh, and afterwards to the magnus, giving branches to both the longus and brevis, and lastly to the gracilis.

3. 3. 4 The posterior, passes through the same sinus, and running immediately down between the two obturators, gives a branch to the external; it goes out then by that external branch, 4, and runs down between the pectineus and the adductor longus and brevis on the fore-part, and the obturator externus and adductor magnus behind, terminating in branches in the adductor magnus.

5 The sciatic nerve.

6. 6 The crural nerves. The right of which is composed of the third and fourth lumbar nerves conjoined, and a portion of the second. In the left there is formed a kind of infula, through which I have observed a slip of the great psoas muscle to pass.

7. 7 Branches of the crural nerves going to the internal iliacs.

8. 8 The external branches of the crural nerves, which running down the thighs, give branches to the internal iliac muscles, the muscoli recti of the leg, the vasti interni, the crurei, and the vasti externi.

9. 9 The internal branches of the crural nerves, which run down the thigh, and in their course give off branches to the vasti interni.

10. 10 The roots of the nerves M. M Fig. 1.

11. 11 The roots of the nerves N. N Fig. 1.

12 Here the internal branch of the right crural nerve, emerging between the muscles gracilis and sartorius, is cut off, where it should terminate in the nerve, S, on the right side, Fig. 1.

13 The root of that branch, which after it has perforated the sartorius muscle, makes R, Fig. 1.

14 The internal branch of the left crural nerve cut off, where it is about to penetrate between the gracilis and sartorius muscles, and to terminate in the nerve, S, on the left side, Fig. 1.

15. 15 The branches 9. 9 Fig. 4. of the sciatic nerves, which emerge forwards between the fibulae and peronei longi, and then run downwards, first under the long extensors of the toes, then between the long extensors of the great toes, and the tibialis antici; afterwards they go out under the long extensors of the great toes 16. 16, and continue their course to the extremities

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extremities of the feet. They produce the branches, 17. 17. 18. 19. 20. 21: of which 17. 17 belong to the long extensors of the toes; 18 to the peroneus longus; 19 is subcutaneous, and divides itself into two branches, which answer to the branches 20 and 21; 20. 21 are a variation of the branch 19, dividing itself sooner into 20. 21, which make the subcutaneous ones 3 and 4, Fig. 1.

22. 22 The fifth, sixth, seventh, and eighth pair of cervical nerves, variously conjoined, together with accessory branches from the first of the costal nerves. They first proceed to the axillæ, and afterwards terminate in the brachial nerves.

23 A branch, which arising from the above nerves in their course to the axilla, is distributed to the inside of the pectoral muscle.

24 A branch, which arising in the same manner from the above nerves, is bestowed upon the inside of the serratus anticus.

25. 25 A branch, which going off like the former from the above nerves, belongs to the muscle called latissimus dorsi. Its progress under that muscle, is shewn 41, Fig. 4.

26 A branch of the sixth pair of cervical nerves, bestowed upon the serratus magnus muscle, running down according to the direction of that muscle, and afterwards under the latissimus dorsi. Its progress under this last, is shewn 42, Fig. 4.

27. 28. 29. 30: 27. 28. 29. 30 The four large brachial nerves, in which those running on each side by the axillæ principally terminate. 27. 27 The first, which in a manner perforate the muscoli coracobrachiales. 28. 28 The second, which run according to the length of the humerus as far as the bending of the arm, and from thence by the fore-arm, down to the palm of the hand. 29. 29 The third, which run on the back part of the humeri, and make 43. 43, Fig. 4.

30. 30 The fourth, which run down according to the length of the humerus, to the posterior part of the large condyle, and from thence by the fore-arm to the palm of the hand.

31 A branch of the third brachial nerve 29, which running backwards, makes 37, Fig. 4.

32 The first of the brachial nerves 27, after it has run a little way under the coracobrachialis muscle, makes its way through it, and afterwards runs under the shorter head of the biceps, giving branches to this, and the internal brachial muscle; afterwards emerging between these two muscles on the fore-part of the arm, it becomes the subcutaneous nerve 25, Fig. 1. but here where it emerges, it is cut off, 33.

34 A branch of the first of the brachial nerves, which it sends off to join the second. The same in the left arm.

35. 35 Here the second trunk of the brachial nerves 28. 28, give branches to the pronatores and teretes, the radiales interni, the sublimes, and palmares longi muscles.

36. 36 Considerable branches of the second brachial nerves, which send off branches to the profundus, and the long flexors of the thumbs; and afterwards 37. 37 get in between these muscles, and run down to the pronatores quadrati muscles.

37 This second of the brachial nerves, passes through the ligament of the wrist on the inside; afterwards 39 proceeds to the wrist, where it divides into five branches, 40. 41. 42. 43. 44. Of which

40 The first, gives a branch to the third lumbrical muscle, after which it divides itself into two; one branch running along the side of the ring finger next the middle finger, and the other along the side of the middle finger next the ring finger.

41 The second gives a branch to the second lumbrical, and afterwards divides likewise into two; one branch running along the side of the middle finger next the fore finger, and the other along the side of the fore finger next the middle finger.

42 The third gives a branch to the first lumbrical, and afterwards runs upon the side of the fore finger next the thumb.

43 The fourth goes to the thumb, and there dividing into two, runs upon each side of it.

44 The fifth, which is here cut off, gives a branch to the short abductor of the thumb. And then it gets between the short flexor and the musculus opponens of the thumb, and belongs to the opponens.

45. 45 Continuations of the nerves 51 Fig. 4. The third pair of brachials 29. 29, after having run backwards by the shoulder bones from the axillæ, and then between the external brachial muscles on the one side, and the long and short heads of the bicipites on the other, and afterwards between the internal brachials and long supinators, emerge here 45. 45, between these last-mentioned muscles, and thence proceed to the inside of the fore-arm, where having given off branches to the long supinators and external radial muscles, they pass through the short supinators 46. 46, and become the nerves 52. 52, Fig. 4.

47. 47 The nerves here cut off, make 27, Fig. 1. and 10, Fig. 3.

48. 48 Branches of the fourth brachial nerve 30, going to the external brachial muscle, 49. 49 to the internal ulnar, 50 to the profundus.

51 A branch of the same, which passes under the internal ulnar to the back part of the extremity of the fore-arm, and makes the subcutaneous nerve 38, Fig. 1. and 15, Fig. 3.

After giving off this branch, the fourth brachial nerve runs before the ligament of the wrist inwards, towards the palm of the hand, where it divides into the branches 52. 53. 54. Of which

52. The first remarkable one, spreading itself in the wrist under the tendons of the profundus and the lumbricales muscles, its branches are distributed principally to these, viz. the abductor of the little finger, the adductor of the fourth metacarpal bone, the interosseous muscles, the adductor of the thumb, the short flexor of the thumb, and the abductor of the fore finger,

53 The second, after it has given off the subcutaneous branch which is here cut away, and another to the abductor of the little finger, runs along the back side of the little finger.

54 The third, dividing into two at the roots of the ring finger and little finger; one branch runs along the side of the little finger next the ring finger, and the other along the side of the ring finger next the little finger.

FIGURE III.

This figure shews the subcutaneous nerves, some of which run between the muscles, some perforate them, and some run upon the fore-part of them. It is taken from Eustachius, Tab. 23. N°. 2.

There is a prodigious number of nerves bestowed upon the (fat) and these, as I think I have observed in dissecting, are not so frequently inserted into the skin, as is commonly imagined; but for the most part being divided into slender fibres, terminate in the substance of the fat. De multitud. Cap. XXXIII.

a The portio dura of the auditory nerves. See d, &c. Fig. 2.

b The third of the cervical nerves, h Fig. 1.

c The recurrent nerve, g Fig. 1.

d The second of the cervical nerves, c Fig. 1. But here it joins itself with a branch of the nerve c.

e. e Branches of the second cervical nerves. The left is a continuation of the nerve g Fig. 4.

f This branch makes a Fig. 1.

g A continuation of the branch b Fig. 1.

h. h Branches of the fourth pair of cervical nerves, which make i Fig. 1. The left perforate the cucullaris muscle, to which those on the right side answer.

i. k. l. m. n. o. p. q. r. s. t. u. v. w. x. y. z. A. B. C. D. E. F. G. H. I. K. L. M. N. O. P. Q Branches of the cervical, dorsal, and lumbar nerves, running backwards through the muscles to the parts under the skin.

R. R Nerves perforating the infraspinati muscles. Are these produced from the nerves 36. 36 Fig. 4?

S A continuation of the nerve 9 Fig. 1.

T A continuation of the nerve 8 Fig. 1.

V A continuation of the nerve 7 Fig. 1.

W A continuation of the nerve 6 Fig. 1.

X A continuation of the nerve 13 Fig. 1.

Y A continuation of the nerve 12 Fig. 1.

Z A continuation of the nerve 11 Fig. 1.

Γ A continuation of the nerve 10 Fig. 1.

Δ. Δ Branches, which make Ψ. Ψ Fig. 1.

Θ. Λ. Ε. Π. Σ. Φ. Ψ: Θ. Λ. Ε. Π. Σ. Φ. Ψ Appear to be continuations of the nerves ν. ξ. ο. π. ς. σ. ς Fig. 4.

Ω. Ω Continuations of the nerves ω. ω Fig. 4.

α. α Continuations of the nerves 1. 1 Fig. 4. Here it appears how the right and left differ from each other. The branch β of the left makes V Fig. 1. the branch γ makes W, and the branch δ makes X of the same Fig. 1.

ε A continuation of the nerve A Fig. 1.

ζ A continuation of the nerve B Fig. 1.

η A continuation of the nerve C Fig. 1.

θ A continuation of the nerve D Fig. 1.

ι A continuation of the nerve E Fig. 1.

κ A continuation of the nerve F Fig. 1.

λ. λ The sciatic nerves.

μ. μ Branches of the sciatic nerves, which run down upon the fore-part of the legs. They are the same with 9. 9 Fig. 4. and 15. 15 Fig. 2.

ν This supplies the defect of the nerve α, which does not run down upon the right, as it does upon the left leg.

ξ. ξ Branches of the sciatic nerves; continuations of 13. 13 Fig. 4. which about that part certainly arise from the sciatics. The left joins in with the nerve 6, in the same manner as 5 with 3 Fig. 1. The branch ο of the right, makes 5 Fig. 1.

π. ς Make 4 and 3 Fig. 1. and π makes z Fig. 1. The branch σ makes 1 Fig. 1. and the branch ς makes 2 in the same Fig. 1.

ς. ς Continuations of the nerves 7. 7 Fig. 1.

τ A continuation of the nerve 12 Fig. 1.

υ A continuation of the nerve 11 Fig. 1.

φ. φ These arise from the branches of the third of the brachial nerves 37. 37 Fig. 4.

χ. χ Branches of the third pair of brachial nerves. They are the same with 47 and 50 Fig. 4. Their branches ψ. ψ make 24. 24 Fig. 1. and the branch ω makes 30 Fig. 1.

ι. ι Branches of the third pair of brachial nerves; one in the right arm, and two in the left; which makes a variation. Those of the left are certainly 48. 49 Fig. 4. Their branch 2 makes 33 Fig. 1. the branch 3 makes 34, and the branch 4 makes 32 of the same, Fig. 1.

5 A continuation of the branch 31 Fig. 1.

6 A branch of the first trunk of the brachial nerves. It is the same with 25 Fig. 1. A continuation of the nerve 33 Fig. 2. its branch 7 makes 35 Fig. 1.

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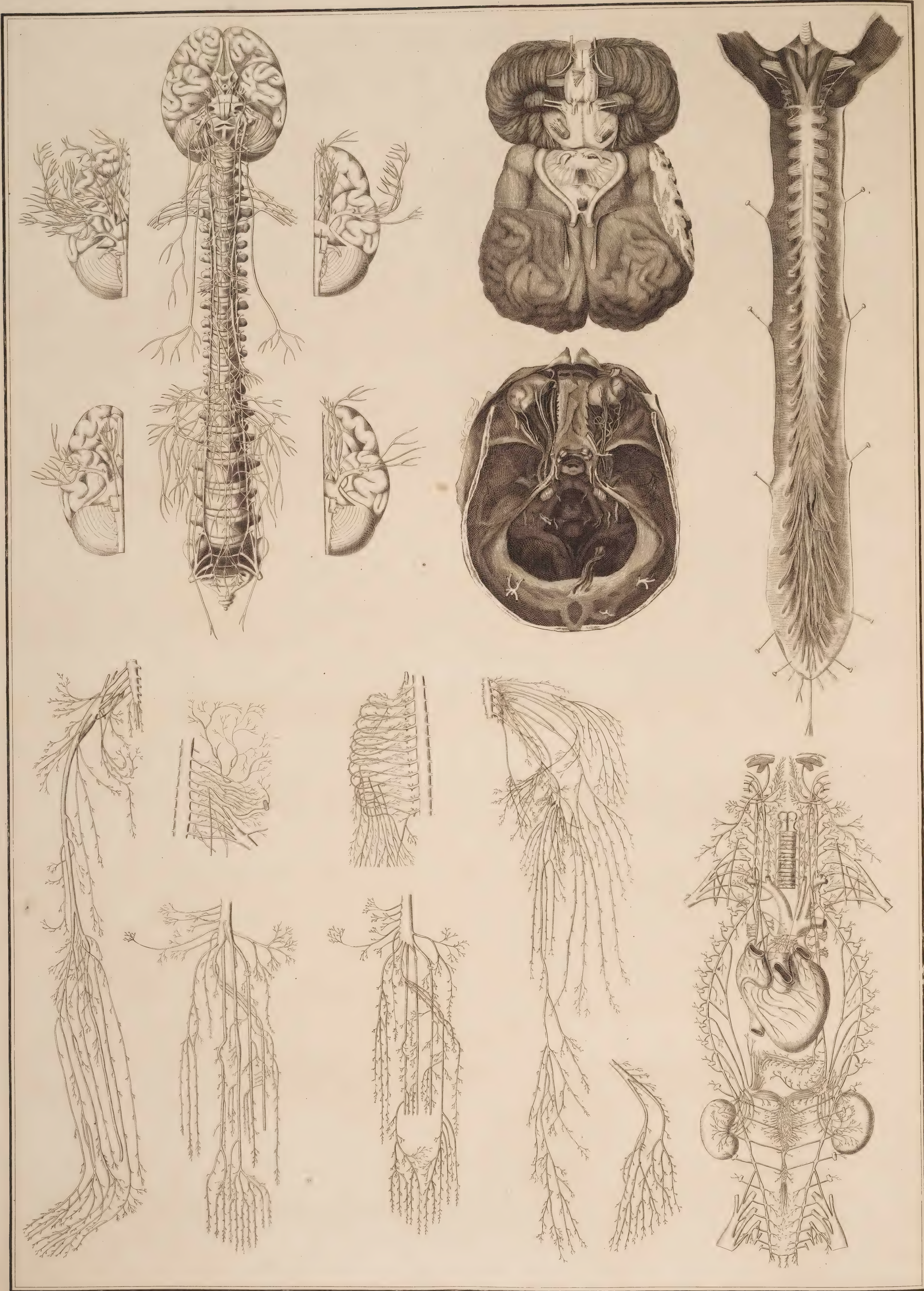
- 8 A continuation of the nerve 19 Fig. 1.
 9 A continuation of the nerve 20 Fig. 1.
 10 A branch of the third trunk of the brachial nerves. It is the same with 27 Fig. 1. A continuation of the nerve 47 Fig. 2. its branch 11 makes 36 Fig. 1.
 12 A continuation of the nerve 37 Fig. 1.
 13 A continuation of the nerve 17 Fig. 1.
 14 A continuation of the nerve 18 Fig. 1.
 15 A branch of the fourth trunk of the brachial nerves. It is the same with 38 Fig. 1. which is a continuation of the branch 51 Fig. 2. Here it joins in with a branch of the nerve 17.
 16 A continuation of the nerve 26 Fig. 1.
 17 A continuation of the nerve 28 Fig. 1.
 18 A continuation of the nerve 29 Fig. 1.

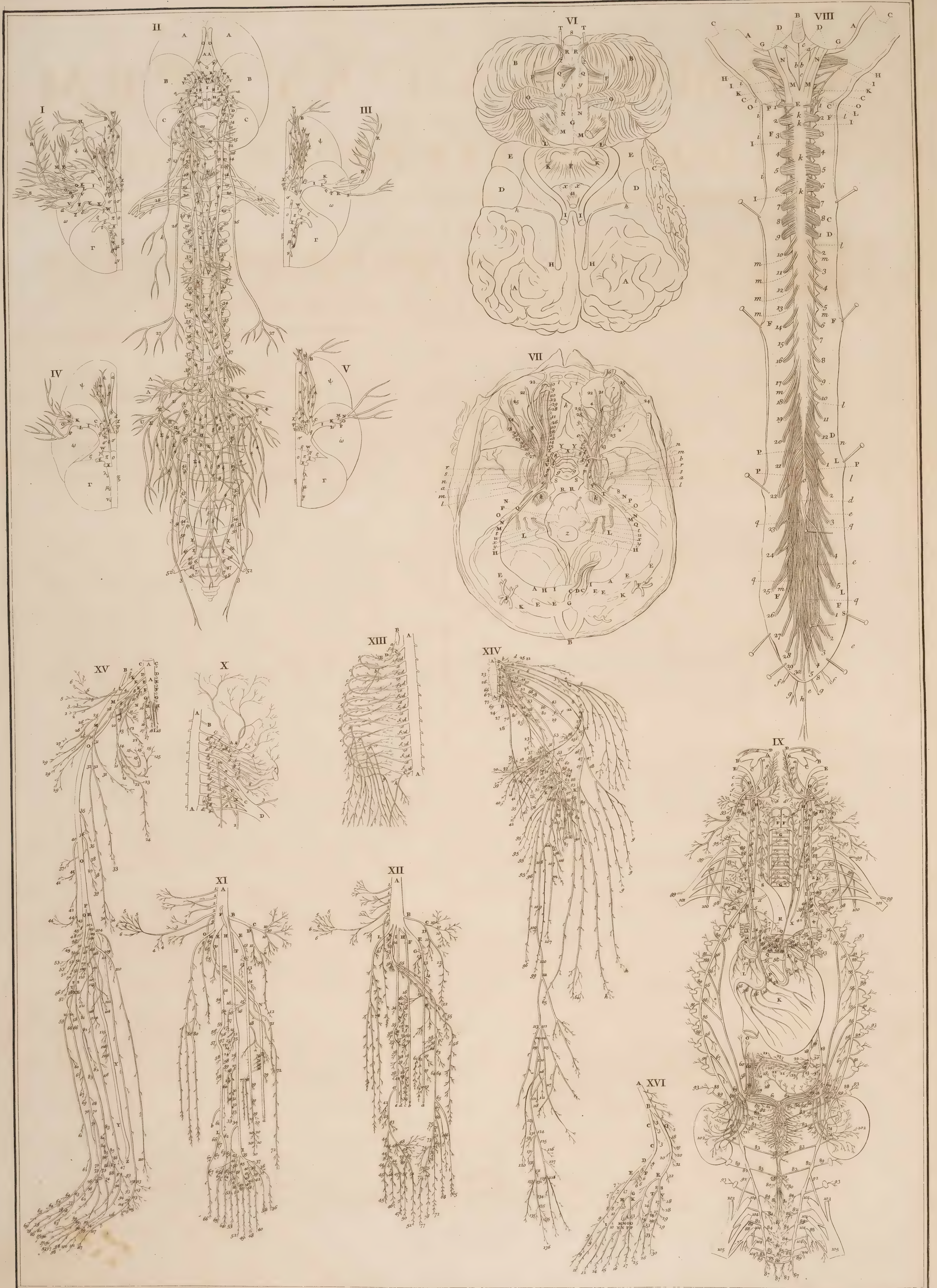
FIGURE IV.

This figure, like the second, shows the internal nerves; and is taken from Eustachius, Tab. 20. N^o. 2.

- a The recurrent nerve: A continuation of the nerve f, Fig. 2.
 b A branch of the fourth pair of cervical nerves, making F on the left side, Fig. 2. which branch joins itself to the recurrent; and from the conjunction of these is produced the nerve c, belonging to the cucullaris muscle.
 d. d Branches of the fifth pair of cervical nerves, which perforate the middle scaleni muscles, and afterwards running down upon the back, distribute their branches to the large rhomboidei.
 e A posterior branch of the second of the cervical nerves on the right side, which emerging here between the inferior oblique and the larger rectus and posticus of the head, gives a branch to the rectus, and runs on towards the complexus, which it is just going to perforate, where it is here cut off f.
 g The same branch on the left side, leaving the complexus, and cut off where it is about to perforate the cucullaris, and become the subcutaneous nerve e, on the left, Fig. 3.
 h A branch of the first of the cervical nerves.
 i. k. l. m. n. o The last branches of the cervical nerves; i of the third, l of the fourth, n of the fifth, o of the sixth. But k is a branch which derives its origin from the nerve i; and m in the same manner derives its origin from the nerve l. At least this seems to be the case to me, and I am certain that I always meet with such nerves here.
 p. q. r. s More posterior branches of the cervical nerves, which perforate the serratus posticus superior, the rhomboideus major and minor, and the sacrolumbalis: p a branch of the third, q of the fourth, r of the fifth, and s of the sixth. They afterwards likewise perforate the cucullaris muscle, and become subcutaneous, Fig. 3.
 t. u. &c. Posterior branches of the dorsal nerves; t of the first, u of the second, w of the third, x of the fourth, y of the fifth, z of the sixth, A of the seventh, B of the eighth, C of the ninth, D of the tenth, E of the eleventh, F of the twelfth, G of the first of the loins, H of the second, I of the third, K of the fourth.
 L. M. N. O. P. Q. R. S. T. U. V. W. X. Y. Z. Γ. Δ Branches of the dorsal and lumbar nerves, passing through the muscles adjacent to those parts near the spine. Those branches which are given off from the sacrolumbales, are marked W. Y. Z.
 Θ. Λ. Ξ. Π. Σ. Φ. Ψ. Ω. Ω. α. β. β. γ Branches of the costal nerves, which penetrate the intercostal muscles towards the back. Θ Of the sixth pair, Λ. Ξ of the seventh, Π. Σ of the eighth, Φ. Ψ. Ψ of the ninth, Ω. Ω α. α of the tenth, β. β. γ of the eleventh.
 δ. ε. δ. ε Branches of the twelfth pair of costal nerves, σ. σ Fig. 2. which perforate the transverse muscles of the abdomen, and then run between these and the internal oblique forwards.
 ζ. ζ Branches of the first pair of lumbar nerves, υ. υ Fig. 2. which likewise perforate the transverse muscles, and afterwards run forwards between these and the internal oblique.
 η A branch of the first of the nerves of the os sacrum, going out at the first of the posterior foramina of that bone.
 θ A branch of the second of the nerves of the os sacrum, going out at the second of the posterior foramina of that bone. Here it appears how it receives a twig from a branch of the first, η.
 ι A branch of the third of the nerves of the os sacrum, going out at the third of the posterior foramina of that bone.
 κ A branch of the fourth of the nerves of the os sacrum, going out at the fourth of the posterior foramina of that bone.
 λ A nerve, going out between the os sacrum and coccygis.
 μ The extremity of the cauda equina, going out at the extremity of the canal of the os sacrum.
 ν. ξ. ο. π. ρ. σ. ς The nerves Θ. Λ. Ξ. Π. Σ. Φ. Ψ. Fig. 3. seem to be continuations of these. Query, whether ν, which is going out between the common heads of the sacrolumbalis and longissimus dorsi muscles, is the first branch of the nerve η cut off? and ξ, the first branch of the nerve θ? and ο, the first of the nerve ι? &c.
 τ. τ The sciatic nerves.
 υ. υ Branches of the sciatic nerves, which running between the two ligaments on each side of the os sacrum belonging to the ischia, distribute their branches to the fat, on the sides of the anus.

- χ. χ Branches of the sciatics, which running under the great glutei muscles, give off to them the branches ψ. ψ; then below the glutei they become subcutaneous Ω α. Ω α, Fig. 3. and the lopped branches ω. ω make Ω. Ω, Fig. 3. and the branches ι. ι make α. α. of the same figure.
 Here there appears a variation of the nerves φ. χ. φ. χ, which arise on the left side from a common root; and also a variety in their branches.
 2. 2 Branches of the sciatics, going to the glutei magni.
 3. 3 Branches of the same nerves, which soon dividing into two, one of them, viz. 4, belongs to the internal part of the long head of the biceps of the leg; and the other, 5, to the internal part of the femitendinosus.
 6. 6 Branches of the same, which send off others to the internal part of the femitendinosi and femimembranosi muscles.
 7. 7 Branches still of the sciatic nerves, belonging to the internal part of both heads of the bicipites muscles of the legs.
 8. 8 More branches of the sciatics, bestowed upon the short heads of the above bicipites muscles.
 9. 9 Branches of the same, running to the fore-part of the thighs, and constituting the nerves 15. 15, Fig. 2.
 10 The root of that branch which becomes subcutaneous at the calf of the leg, and constitutes ν, Fig. 3.
 11. 12. 13. 14: 11. 12. 13. 14 Branches still of the sciatic nerves. Query, whether 11. 11 go to the external heads of the gemelli, &c. and 12. 12 to the internal? 13. 13 their roots, which make ξ. ξ, Fig. 3? 14. 14 to the poplitei muscles? &c. The sciatics certainly produce these nerves about the hams.
 15. 15 Branches of the sciatics, going to the tibiales postici.
 16. 16. 16 Branches of the same, going to the long flexors of the toes.
 17. 17. 18. 18 Other branches, going to the long flexors of the great toes.
 19 A branch going to that head of the long flexor of the toes, which it receives in the sole of the foot.
 20 A branch of the sciatic nerve, which produces the branches 21. 22.
 23. 24. 25.
 21 Directs its course, and distributes its branches, to the adductor of the great toe, the interossei muscles, &c.
 23 Is spent upon the abductor of the little toe.
 24 Runs along the external side of the little toe.
 25 Proceeds to the roots of the fourth and fifth toes, where it divides itself into two; one branch running upon the side of the fifth toe next the fourth, and the other upon the side of the fourth toe next the fifth.
 26 A branch of the sciatic, which runs along the inside of the great toe, and produces the branch 27 going to the abductor of the great toe.
 28 A branch, which proceeds to the root of the great toe, and of the second, where it divides into two; one branch running along the side of the great toe, next the second toe, and the other along the side of the second toe, next the great toe.
 29 Goes to the first lumbrical muscle.
 30 A branch, which goes to the root of the second and third toes, and there dividing into two; one branch runs upon the side of the second toe, next the third; and the other upon the side of the third, next the second.
 31 Goes to the second lumbrical muscle.
 32 A branch, which runs to the root of the third and fourth toes, where it divides itself into two; one branch going along the side of the third toe, next the fourth, and the other upon the side of the fourth, next the third.
 33 Goes to the third lumbrical muscle.
 34. 34 Branches of the fifth pair of cervical nerves, which proceed by the lunated notches of the scapulæ, near the processus coracoidei; and then give off the branches 35. 35, which run along under the supraspinati muscles, and supply them with branches. Afterwards 36. 36 wind themselves about the spines of the scapulæ, run under the infraspinati muscles, and give off branches to them.
 37. 37 Branches of the third of the brachial nerves, 31 Fig. 2. whence arise the branches 38, going to the teres major, and 39 to the deltoid. Is 40 the root of the nerve φ, Fig. 3?
 41 A part of the nerve 25, Fig. 2. running down between the latissimus dorsi and serratus magnus.
 42 A part of the nerve 26, Fig. 2. running down between the same muscles.
 43. 43 The trunks of the third brachial nerves, which run behind the bones of the shoulder. They are the same with 29. 29, Fig. 2.
 44. 44: 44. 44 Branches of the above trunks going to the external brachial muscles; 45. 45 to the long, and 46. 46 to the short.
 47 Seems to be the root of the branch χ in the left arm, Fig. 3.
 48. 49 Seem to be the roots of the branches ι in the left arm, Fig. 3. Certainly that trunk gives off such branches.
 50 Seems to be the root of the branch χ in the right arm, Fig. 3.
 51 This third trunk of the brachial nerves running on, makes 45, Fig. 2. 'Tis the same in the left arm.
 52. 52 The trunks 46. 46 of the third of the brachial nerves, Fig. 2. which having perforated the short supinator muscles, direct their course to the external part of the fore-arm; where after giving off branches to the neighbouring muscles, they make 53. 53, going under the great extensors of the thumbs, and also the indicators; below which they emerge 54. 54.
 55 The fourth of the brachial nerves, 30 Fig. 2. It gives off to the profundus the branches 56. 57. 58.





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TABLE IV.

THIS table, which consists of sixteen different figures, represents the nerves of the particular parts, and is taken from Eustachius, Du Verney, Haller, and Vieussens. The first five are from Eustachius, Tab. 18. with Albinus's explanation.

FIGURE I, III, IV, and V.

These four figures resemble one another, with this difference; that in the third, fourth, and fifth, are represented only some of those nerves separately, which the first figure contains altogether. For in the third, fourth, and fifth figures, the others are cut away, in order that these may appear distinct; which in the first, on account of their number, cannot so easily be distinguished.

They represent the basis of the brain, with the beginning of the medulla spinalis, divided lengthwise through the middle, together with the nerves.

Figure 1. 3. 4. 5. a The processus mammillaris.

1. 3. 4. 5. b. c. d The optic nerve. c That part of it which is before the conjunction of the two together. d One side of that conjunction, divided longitudinally through the middle.

1. e The retina.

4. 3. 1. 5. f The trunk of the third pair of nerves of the brain, called the motores oculorum, arising near the fore-part of the processus annularis. It produces the following branches,

4. 3. 1. g Belonging to the adductor muscle of the eye.

4. 3. 1. h To the inferior oblique.

4. 3. 1. i To the depressors.

4. 3. 1. k Which divides into two, of which

4. 3. 1. l The one goes to the musculus attollens of the eye, and

4. 3. m The other belongs to the levator of the upper eye-lid.

5. 3. 1. 4. n The fourth pair of nerves of the brain, which is called the pathetic, belonging to the superior oblique muscle of the eye.

4. 1. 3. 5. o The sixth pair of nerves of the brain, belonging to the adductor muscle of the eye, arising near the fore-part of the corpus olivare and pyramidale.

1. 4. p A branch of the intercostal nerve, which joins itself with the sixth pair. See §. § Fig. 2.

1. 3. 4. 5. q The trunk of the fifth pair of nerves, arising from the side of the processus annularis. It divides itself into three branches, the first, second, and third.

5. 3. 1. 4. r The trunk of the first branch of the fifth pair of nerves, called the ophthalmic branch.

5. 3. 1. s A branch of the ophthalmic, which runs upon the inside of the bony orbit, near the nose, and produces the branches t. u. w. x. Of which does

5. 3. 1. t Belong to the ciliary nerves?

5. 3. 1. u. w Escapes by a small foramen, at the conjunction of the os frontis with the planum, from the bony orbit to the frontal sinus, and from thence into the cavity of the cranium; afterwards u passes into the nose through a foramen of the os cribriforme.

5. 3. 1. x Goes out at the great angle of the eye, and at the root of the nose twists itself upwards towards the forehead.

5. 3. y (The same in r) the division of the ophthalmic into the branches z. A. B. Of which

5. 3. 1. z Goes out to the forehead near the greater angle of the orbit.

5. 3. 1. A. B Having accompanied the branch z almost to the eye-brow, it goes out at a foramen in the superciliary ridge of the frontal bone; and B winds itself upon the forehead, making a, Fig. 2. Tab. 3.

1. 3. 4. 5. C The second branch of the fifth pair of nerves. It produces the following branches, viz.

1. D The palatine, which sinks first down by a canal, made by the upper maxillary bone and the os palati; and from thence going out E, it twists itself forwards to the palate, and runs upon it.

1. F The nasal, which gets into the posterior part of the nose, through a foramen which is made by the os palati and the basis of the multiforme, at the posterior, superior, and lateral part of the nose.

1. G The orbiter, which runs by the lower part of the orbit, and going out at the foramen below it, becomes H; winding itself, and distributing branches to the parts of the face below the eye, as it is represented Tab. 3. Fig. 2. b.

1. 3. 4. 5. I The third branch of the fifth pair of nerves, which divides itself into K the anterior, and L the posterior.

1. 3. 4. 5. K The anterior branch of the third branch of the fifth pair of nerves produces

4. 1. 5. M A branch, which runs upon the outside of the buccinator muscle.

5. 1. 4. N Going to the temporal muscle.

4. 1. 5. O To the pterygoideus externus.

4. 1. 5. P To the masseter.

1. 3. 4. 5. L The posterior branch of the third branch of the fifth pair of nerves, produces

3. 1. Q The lingual branch.

3. 1. R The maxillary, which enters the canal of the lower jaw, and runs along it.

It sends off very few branches, or almost none at all. De Dent. Cap. XX.

3. 1. S A nerve, which leaves the maxillary branch R, before it enters the canal of the lower jaw, and runs by the inside of the maxilla forwards, to the mylohyoideus muscle, and the second belly of the digastric, &c.

1. 3. T The chorda tympani, joined on one side with the maxillary branch R, and on the other with the portio dura of the seventh pair of nerves Z.

From another branch of the fourth pair of nerves of the same viscus (viz. the brain) is sent off a small twig, which being reflected near the bony canal I have already described, enters the cavity of the ear, in which the bones of hearing are contained, and adheres obliquely to the tympanum, and afterwards to the malleus, above the insertion of its muscle; nor does it end there, but running on, it perforates the os petrosum behind the meatus auditorius; then being reflected downwards, runs on a little way, and at last joins itself with the smaller branch or portio dura of the fifth pair of nerves of the brain, and is firmly united with it. De aud. org.

1. 3. V A branch of the posterior branch L of the third branch of the fifth pair of nerves, which joins itself with the portio dura of the seventh pair.

1. 3. 4. 5. W The portio dura of the seventh pair of nerves, which are called the auditory, arising from the fore-part of the external side of the corpus olivare. But first

1. X Attending the portio mollis, runs along with it by the common canal in the os petrosum. Afterwards getting out, it bends itself at Y, where it is about to enter the aqueduct of Fallopius. Through this aqueduct it runs to Z, and by the way joins itself with the chorda tympani. After it leaves the aqueduct, it joins itself at α, with the branch V of the third branch of the fifth pair of nerves.

1. 3. 4. 5. γ The portio mollis of the seventh pair of nerves, called the auditory, arising from the fore-part of the corpus olivare, near the external side of the portio dura.

The fifth pair of nerves of the brain are by no means composed only of two nerves, as some anatomists imagine; but each trunk is made up of two unequal portions, of which the longest is hollowed, and receives the other into a groove as it were, which has not been observed by others; and, joined together in that manner, they run on obliquely forwards and outwards, to the extremity of a sinus in the os petrosum, which seems to be made on purpose for them. There the lesser branch, leaving the larger one, enters a foramen which is proper to it, and in a very extraordinary winding course, which it is not necessary at present to describe, it gets out of the cranium. But the larger one seems to terminate in three different portions, at some distance from one another; the chief of which runs into a small foramen, that leads into the cochlea. De aud. org.

1. δ This appears to be the cochlea, to which the portio mollis must belong.

1. 3. 4. 5. ε The eighth pair of nerves, arising by several originations from the external side of the corpus olivare.

A COMPLEAT SYSTEM OF THE BLOOD-VESSELS AND NERVES.

1. 3. ζ. η. θ. ι The recurrent nerve, arising by the three different beginnings ζ. η. θ, and afterwards joining itself with the trunk of the eighth pair.

Three branches of the sixth pair of nerves of the brain, taking their origin from the medulla spinalis. Off. exam.

1. 3. 4. 5. κ The ninth pair of nerves of the brain, arising by different origins from the posterior part of the external side of the corpus pyramidale.

1. 3. 4. 5. λ The first pair of spinal nerves.

1. 3. 4. 5. μ The second pair of spinal nerves.

1. 3. 4. 5. ν The third pair of spinal nerves.

1. 3. 4. 5. ξ The medulla spinalis.

1. 3. 4. 5. ο The corpus pyramidale.

1. 3. 4. 5. π The corpus olivare.

1. 3. 4. 5. ρ The medullary trunk, proceeding from the cerebellum to the medulla oblongata, and making the process annularis.

1. 3. 4. 5. σ The process annularis.

1. 3. 4. 5. τ The crura medullæ oblongatæ.

1. 3. 4. 5. υ A little space, between Willis's gland, the crura medullæ oblongatæ, and the annular protuberance.

1. 3. 4. 5. φ Willis's gland, behind the infundibulum.

1. 3. 4. 5. χ A cineritious body, situated in the posterior angle of the conjunction of the optic nerves, between the crura of the medulla oblongata. In it is the inferior orifice of the third ventricle of the brain, from which goes the infundibulum.

1. 3. 4. 5. ψ. ω The lobes of the brain, ψ the anterior, ω the middle lobe.

1. 3. 4. 5. Γ The cerebellum.

FIGURE II.

A A. A A. B. B The basis of the brain. A A. A A The anterior lobes, B. B the middle ones.

C. C The basis of the cerebellum.

D. D The extremities of the transverse process of the atlas.

E. E The prominent margins of those cavities of the atlas, which receive and support the coronoid processes of the os occipitis.

F. F The medullary trunks, which are sent from the cerebellum to the medulla oblongata, and make the annular protuberance.

G. G The corpora pyramidalia.

H. H The corpora olivaria.

I. I. I The annular protuberance.

K. K The crura medullæ oblongatæ.

L The little space between the annular protuberance, the crura medullæ oblongatæ, and Willis's gland.

M Willis's gland, situated behind the infundibulum.

N A cineritious body, situated in the posterior angle of the conjunction of the optic nerves, between the crura medullæ oblongatæ. In this body is the inferior orifice of the third ventricle of the brain, from which goes the infundibulum.

O. O The processus mammillares.

P. P The optic nerves. Q Their conjunction.

R. R. R The same, before they are conjoined.

S. S The third pair of nerves of the brain, called the motores oculorum, arising near the anterior part of

T. T The fourth pair of nerves of the brain, called the pathetic.

V. V The fifth pair of nerves of the brain, arising from the side of the annular protuberance.

W. X. Y: W. X. Y The three branches into which it divides: W the first, X the second, Y the third.

Z. Z The sixth pair of nerves of the brain, arising near the anterior part of the corpora olivaria and pyramidalia.

a a. a a The portiones duræ of the seventh pair of nerves of the brain, arising from the fore-part of the external side of the corpora olivaria.

b. b The portiones molles of the same seventh pair of nerves, arising from the side of the corpora olivaria, immediately behind the former.

c. c Appear to be the cochleæ, to which the portiones molles belong.

d. d The eighth pair of nerves of the brain, arising by different originations from the posterior part of the external side of the corpora olivaria.

e. e The recurrent nerves, joining themselves to the eighth pair of the brain.

f. f The trunks of the eighth pair of nerves of the brain, joined with the trunks of the recurrent nerves.

g. g. g The recurrent nerves, after they have left the eighth pair of the brain.

h A branch of the recurrent, which belongs to the cleidomastoideus and sternomastoideus muscles.

i A branch of the recurrent, which joins itself with the third pair of cervical nerves. Compare h Fig. 2. Tab. 3.

k The branchy extremity of the recurrent, bestowed chiefly upon the cucullaris muscle.

111.111 The trunks of the eighth pair of nerves of the brain.

m. m The lingual branches of the eighth pair, which are principally spent upon the root of the tongue, and also upon the parts next to it of the pharynx, &c.

n. n The upper branches of the eighth pair of nerves belonging to the larynx, which run in between the os hyoides and the thyroid cartilage to the internal part of the larynx; where o joins itself with the laryngeal recurrent, or accessorius of Willis.

p The right accessorius of Willis, or the inferior, right recurrent, arising by a double beginning from the eighth pair of nerves on the right side.

q The conjunction of the right accessory nerve, with the right intercostal.

r The left accessory of Willis, or the inferior, left recurrent, arising by a double origin from the left trunk of the eighth pair of the brain, but lower than the right.

s A nerve, which joins the left cardiac with the left accessory nerve.

t The branchy extremity of the accessory nerves, sent to the thyroid glands, the pharynx, the arytenoid, posterior cricoarytenoid, and thyro-arytenoid muscles.

u. w. x The right cardiac nerve, arising by a double origin; w the one from the right accessory nerve, x the other from the right trunk of the eighth pair of the brain.

y. z. α The left cardiac nerve, arising likewise by a double origin; z the one from the left trunk of the eighth pair of nerves of the brain, α the other from the left intercostal nerve, as seems to appear from the figure.

β A nerve, by which the cardiacs are joined with one another.

γ The branchy extremity of the cardiac nerves, going to the heart and the parts belonging to it.

δ. δ. δ The pulmonary nerves, arising from the eighth pair.

ε. ζ: ε. ζ The division of the eighth pair into two branches, which presently unite again, and so form a kind of infula, which is smaller on the left side than on the right.

η. η. η Branches by which the trunks of the eighth pair are united, both before and behind the lower part of the œsophagus.

θ A branch of the left trunk of the eighth pair, which runs upon the upper part of the stomach from the œsophagus to the pylorus, and gives off branches to the stomach, especially to the fore-part of it.

ι The branchy extremity of the left trunk of the eighth pair of nerves, belonging to the fore-part of the stomach on the left side, near the lower orifice of the œsophagus.

κ The branchy extremity of the right trunk of the eighth pair of nerves, belonging to the posterior part of the stomach on the left side, near the lower orifice of the œsophagus.

λ A branch of the right trunk of the eighth pair of nerves, which answers to the branch θ of the left, running after the same manner, and giving off branches chiefly to the back part of the stomach.

The sixth pair of nerves of the brain, sends off branches both to the orifice of the stomach, and to the other viscera. De Dent. Cap. XXV.

μ The right trunk running down behind the stomach, and afterwards joining itself with the left intercostal nerve at ν.

ξ. ξ The upper extremity of the intercostal nerves, where they are joined with the sixth pair of nerves of the brain.

ο. π: ο. π Two branches, into which the trunks of the intercostal nerves divide themselves; but afterwards they unite, and so leave a kind of slit, through which passes the internal carotid artery, which together with those branches passes into the cavity of the cranium, by the canal in the os petrosum.

ς. ς The trunks of the intercostal nerves.

σ. σ The upper cervical ganglions of the intercostal nerves.

τ τ τ τ τ. τ τ τ τ τ The trunks of the intercostal nerves, running down near the spine, along the neck, thorax, abdomen, and pelvis.

υ. υ. &c. Ganglions of the intercostal nerves, which are not all marked, for fear of rendering the figure obscure.

φ. φ. φ. &c. Branches, by which the intercostal nerves are united with those of the spine.

χ. χ: χ. χ The conjunction of the last of the intercostal nerves, with the first and second trunk of those which go out by the fore-part of the os sacrum.

ψ. ψ. ψ. ψ. ψ: ψ. ψ. ψ. ψ. ψ. ψ Branches of the intercostal nerves, which united together, make

ω. ω. ω Remarkable trunks, which running down along the vertebræ of the back, perforate the diaphragm, and afterwards are blended and united together both of them with Γ. ν the right trunk of the eighth pair of nerves of the brain, and with one another at Δ.

Θ. Θ Branches of the intercostal nerves, which unite themselves with the branches of the trunks ω. ω.

From the trunks ω. ω of the intercostal nerves, the eighth pair of nerves of the brain, their branches, and conjunction, are produced the following nerves, belonging to the kidneys, the glandulæ renales, the liver, spleen, stomach, intestines, &c.

From that plexus of nerves, near the origins of the mesenteric arteries, arise several branches variously complicated, part of which are sent to the liver near the entry of the vena portarum, and likewise to the gall-bladder, and part go to the kidneys and glandulæ renales, and not only spread themselves externally upon these parts, but some of them enter the kidneys together with the arteries, and are distributed through their substance. De Renib. Cap. XXI.

A. A. A. A

A COMPLEAT SYSTEM OF THE BLOOD-VESSELS AND NERVES.

A. A. A. A Branches going to the liver, whence a great many are likewise sent off to the duodenum. The conjunction of these branches is also represented.

E. E The right gastro-epiploic nerve, which runs from the right side, along the fundus of the stomach, where the omentum adheres to it. It produces the branches Π. Π. Π belonging to the stomach, and Σ. Σ. Σ. Σ. Σ to the omentum.

U. U. U A nerve going to the right kidney, and the renal gland, as I think.

Φ. Φ Branches, which I imagine go to the spleen.

Ψ The left gastro-epiploic nerve, which runs from the left side, along the fundus of the stomach, where the omentum adheres to it, and gives off the branches Ω. Ω to the stomach, ι. ι. &c. to the omentum.

2. 2. 2. 2 Branches, which seem to me to go to the left kidney, and glandula renalis.

3. 3. 3. 3. 3. 3 Branches, which belong to the testicles, and accompany the spermatic vessels.

4. 4. 4. &c. Branches, which seem to me to go to the mesentery and intestines.

5. 5. 5. &c. Branches, which uniting together here and there, run down upon the bodies of the vertebræ of the loins and the os sacrum, as far as the bottom of the pelvis; where they join themselves with the branches which they sent off, 6 with the third pair of those which go out from the anterior foramina of the os sacrum, and 7 with the fourth.

8. 8. 8. &c. Branches, which the above 5. 5 receive from the trunks of the intercostal nerves.

9. 9. 9. &c. Do these branches go to the mesocolon, and the left part of the colon?

10. 10. 10 The ninth pair of nerves of the brain, called the lingual; arising by several fibres from the side of the corpora pyramidalia.

11 The branchy termination of the trunk of the above ninth pair of nerves, distributed to the digastric muscle of the lower jaw, the hyoglossus, geniohyoideus, genioglossus, the tongue, &c.

12. 12 A considerable branch of the same ninth pair, which runs down upon the neck, and is distributed to the sternothyroideus muscle, coracohyoideus, sternohyoideus, &c.

13 A branch, by which the second of the cervical nerves is joined with the branch 12 of the ninth pair.

14. 14. &c. The cervical nerves. 14. 14 The second pair, 15. 15 the third, 16. 16 the fourth, 17. 17 the fifth, 18. 18 the sixth, 19. 19 the seventh, 20. 20 the eighth.

21 A branch, by which the second of the cervical nerves is joined with the third.

22. 22 Branches, by which the third pair of cervical nerves is joined with the fourth.

23 A branch of the fourth pair of cervical nerves, which joins in with the recurrent. See Tab. 3. Fig. 4.

24. 25: 24. 25 The origins of the phrenic nerves: 24 arising from the fourth pair of cervical nerves, and 25 from the fifth.

26. 26 The phrenic nerves. The right of which runs down in a straight course, without being turned to a side by the heart; but the left is turned obliquely outwards, from the oblique inclination of the heart to that side.

27. 27 The branchy extremity of the phrenic nerves in the diaphragm.

28. 28 The union and blending together of the four lowest of the cervical nerves, and the first of the dorsal, from which are produced the brachial nerves.

29. 30. 31. 32. 33. 34. 35. 36. 37. 38: 29. 30. 31. 32. 33. 34. 35. 36. 37. 38 The dorsal nerves.

40. 41. 42. 43. 44: 40. 41. 42. 43. 44 The lumbar nerves.

45. 46. 47. 48: 45. 46. 47. 48 The nerves of the os sacrum.

49 A branch, by which the second of the sacral nerves is joined with the third.

50. 50: 51. 51 Nerves; 50. 50 from the last of the lumbar, 51. 51 from the fourth; which being united together, join in with the first pair of sacral nerves, three on the right side, and four on the left, to form the sciatics.

52. 52 The sciatic nerves.

I have put no marks upon the vertebræ and their ligaments, nor on the os sacrum and coccygis; both as they are sufficiently distinguished at first sight, and the figure is rather too full of marks already.

FIGURE VI.

This figure is taken from Du Verney's treatise de organo auditus (Tab. 11. Fig. 1.) and represents the basis of the human brain, cleared of all the blood-vessels, in order to shew the origin of the ten pair of nerves, which come from the medulla oblongata. Here all that part of the substance of the brain, which Willis calls its posterior limbi, is cut off; that is, the incision was carried through that part, where the great lateral branch of the carotid artery runs through the substance of the brain, in the interstice of its limbi. This incision is of use for displaying the true origin of the first of the nerves,

and placing the cerebellum, which when the brain is inverted, rests upon its posterior limbi, in the same plane with the brain itself; which was absolutely necessary, in order to expose to view the true figure of the medulla oblongata, and the origin of all the nerves which take their rise from it.

A. A The anterior surface of the brain inverted.

B. B The cerebellum.

C. C The place where a part of the brain is cut away, which is only represented on one side, but ought to be conceived as done in the same manner on the other.

D. D The corpora striata, or according to others *tubulata*, which constitute the beginnings of the medulla oblongata. Their inferior surface is here represented, and a certain portion of them is cut away with the brain.

E. E The thalami nervorum opticorum.

F The medulla oblongata, the two crura of which are here united, though Willis has described them separate, and at some distance from one another.

G The proceffus annularis.

H. H The first pair of nerves, or the *olfactory*; arising from the basis of the corpora striata, by a kind of medullary cord h. h, which grows thicker where it is bended near the optic nerves.

I. I The second pair of nerves, or the *optic*, as they appear from their origin to their egress through the cranium.

K. K The third pair of nerves, called the *oculorum motores*.

L. L The fourth pair, or the *pathetic*.

M. M The fifth pair.

N. N The sixth.

O. O The seventh, or the *auditory*; divided at its origin into two branches, of which the larger and upper one is called the *portio mollis*.

P. P The eighth pair of nerves, arising from the medulla under the prominences marked y. y.

Q. Q The ninth pair, which are only represented on one side, and turned back, that the figure might not be obscured. On the other side their origin only is marked.

R. R The tenth pair of the *medulla oblongata*, which Willis has confounded with the first of the spinal nerves.

S The medulla cut off, where it begins to enter the vertebræ.

T. T Two nerves, which arise from the *medulla spinalis* within the vertebræ of the neck, and climb up to the brain to be joined with the eighth pair.

U The infundibulum.

X. X Two medullary prominences, which Willis took for glands.

Y. Y Other two medullary prominences, resembling the figure of an olive, which the same author has called the *corpora pyramidalia*.

Z. Z Two small nervous twigs, arising from the medulla oblongata, and united with those nerves of the spine which run up to join the eighth pair. Sometimes there are two or three of these little nervous twigs on each side.

FIGURE VII.

The chief intention of this figure is to represent the egress of the nerves, arising from the brain. Though there are several parts besides belonging to that viscus, such as sinuses and arteries, which are here represented. It is taken from Haller, fascicul. Anat. 1. Tab. 6.

A. A The transverse processes of the dura mater.

B The longitudinal sinus of the dura mater, its posterior extremity bifurcated.

C The fourth sinus bifurcated, having one crus inserted into the right transverse sinus, and the other into the left.

D The remains of the falx of the brain.

E. E The great veins of the transverse processes of the dura mater.

F Veins opening into the transverse sinuses of the brain, in the tentorium cerebelli, which constantly appear.

G The orifice of the posterior occipital sinus.

H. H The right and left posterior occipital sinuses, with their crura, opening into the fossæ jugulares.

I The falx of the cerebellum.

K. K The great transverse sinuses.

L. L The fossæ jugulares.

M. M The inferior petrous sinuses, opening into these fossæ.

N. N The superior petrous sinuses.

O. O The vena cerebelli, opening into these sinuses.

P. P The anterior, inferior, occipital sinuses, not constant.

Q. Q Their extremity going out with the ninth pair of nerves.

R. R The anterior and superior occipital sinus, constant.

S. S Its anastomosis with the receptacula cavernosa and the circular sinus.

T The mouth of the superior petrous sinus, opening into the cavernous.

V. V The receptacles, or cavernous sinuses.

X. X The transverse sinus of the sella turcica.

Y. Y Ridley's circular sinus.

Z. Z The anterior veins of the brain, opening into the cavernous sinuses, constant.

A COMPLETE SYSTEM OF THE BLOOD-VESSELS AND NERVES.

- a. a The principal artery of the dura mater.
- b. b The vein corresponding to it.
- c The place where it passes through the cranium by a foramen proper to it.
- d. d The *carotid* arteries in the receptacle, their extremities cut off, where they enter the brain.
- e. e A small artery sent off in the receptacle, to go to the fifth pair of nerves.
- f. f The origin of the ophthalmic artery from the carotid.
- g. g The posterior clinoid processes, which are angular.
- h The crista galli.
- i. i The frontal sinuses.
- k. k The *fifth* pair of nerves, passing through the dura mater.
- l The third branch of the *fifth* pair of nerves.
- m The second branch of the same *fifth* pair.
- n The first branch of the *ophthalmic*.
- o The *fourth* pair of nerves.
- p The trunk of the *third* pair.
- q A partition separating the *fifth* from the *sixth* pair of nerves.
- r The *sixth* pair.
- s The origin of the *intercostal* nerve.
- t. t The entry of the *seventh* pair into the dura mater.
- u. u The first roots of the *eighth* pair.
- x. x The second root of the *eighth* pair.
- y. y The ninth pair of nerves.
- z The foramen of the medulla spinalis.

In the right eye.

After the bony orbit and a great part of the cheek bone has been taken away.

- 1. 1 The *ophthalmic* artery.
- 2. 2 Its exterior or lachrymal branch, which accompanies the nerve of the same name.
- 3. 3 Its interior branch, which is sent to the nose.
- 4. 4 Branches going to the tunica sclerotica, some of which pass on to the uvea.
- 5. 5 Portions of the levators of the eye-lid and of the eye.
- 6 The extremity of the levator of the eye-lid.
- 7 The *lacrimal* gland.
- 8 The *optic* nerve.
- 20. 21. 22. 23. 24. 25. 26. 27. 28. 29 The same as in the other eye.

In the left eye.

- 9 The *trochlea*.
- 10 The muscle called *pathetic*.
- 11 The levator muscle of the eye.
- 12 The *internal* muscle of the eye.
- 13 The abductor, cut away.
- 14 The *superior* branch of the *third* pair of nerves, going to the levators of the eye, and of the eye-lid.
- 15 The remaining trunk of the *third* pair.
- 16 The *exterior* branch, going to the inferior oblique muscle.
- 17 The *middle* one, going to the inferior straight muscle.
- 18 The *interior* one, going to the internal straight muscle.
- 19 A branch going to the ophthalmic ganglion.
- 20 The *superior* branch of the first branch of the fifth pair of nerves.
- 21 The *exterior* twig of the same branch.
- 22 The *interior*.
- 23 The *exterior* branch of the fifth branch of the fifth pair of nerves.
- 24 Small branches going out to the face by foramina in the cheek bone.
- 25 Small branches going to the lacrimal gland.
- 26 The *inferior* branch of the first branch of the fifth pair.
- 27 A twig of the same, going to the ganglion.
- 28 A small branch going to the nose.
- 29 A small trunk creeping forwards.
- 30 The *ophthalmic* ganglion.
- 31 The small ciliary nerves.
- 7. 8 The same as in the right eye.

FIGURE VIII.

This figure is taken from Haller (fascic. Anat. 1. Tab. 2. Fig. 2.) and represents a back view of the lower part of the medulla oblongata, placed in the basis of the cranium, and the whole spinal marrow produced from it, in its natural situation and connection within the sheath of the vertebrae, (which sheath however does not come in sight) and freed from all its involucri, except the pia mater. Here it is to be remarked, that the posterior part of the os occipitis, as far as the passage of the vertebral artery, and the nerve which attends it, as also the back part of the vertebrae, is taken away; but the anterior part of the os occipitis and os petrosus, may be viewed a little raised, and inclined backwards. The lobes however of the cerebellum with their vermiform

process are inclined forwards, in order that the fourth ventricle, and the parts contiguous to it, may be seen more distinctly.

- A. A That space which contains the lobes of the cerebellum turned forwards, together with
- B Their vermiform process faintly delineated.
- C. C. C. C Portions of the os petrosus and os occipitis, covered with the dura mater.
- D. D Part of the medulla oblongata, from which the medulla spinalis is continued downwards.
- a. a White medullary striae, arising from the sulcus of the fourth ventricle, and going out on each side to the portio mollis of the seventh pair of nerves.
- b. b The fourth ventricle.
- c. c Its longitudinal sulcus continued into the chink of the calamus scriptorius.
- E. E The medulla spinalis.
- d Two eminences of the medulla spinalis, into which the lower extremity of it terminates. They are almost round, entirely smooth, and send off no nervous filaments.
- e. e A ligament, produced from the lowermost border of the pia mater, together with blood-vessels, which are not here represented, running along the middle of the cauda equina, to the extremity of it, and lower, and so resembling an azygous or solitary nerve, which at last disperses itself in the os coccygis. It is supported by little pins, that you might have the clearer view of it.
- f. f The ganglion of the twenty-ninth pair of nerves.
- g. g The ganglion of the thirtieth pair, from which on the left side, besides the nerve which is proper to it, there goes out another small nerve marked h, which forms likewise a kind of ganglion proper to itself.
- F. F The sheath of the medulla spinalis produced from the dura mater, here cut through the middle, and pinned back on each side.
- G. G The seventh pair of nerves.
- H. H The eighth pair, which pass through a double foramen in the dura mater on the right side, and through a single one on the left.
- I. I The accessory nerve from its first origin between the posterior filaments of the sixth and seventh pair, which is more distinctly expressed in the left side than in the right, as far as its egress through the dura mater. In the left side it passes through a hole in the dura mater that is proper to itself; but on the right it passes together with the lower filaments of the eighth pair of nerves. The portions of this nerve which are covered with nervous filaments, are marked with small points. On the side
- i. i Are its little roots, of which four are filamentous, arising from the medulla oblongata, and six arise distinct, from the medulla spinalis; part of them very conspicuous, and part of them likewise covered with nervous filaments, where they are marked with small points.
- k. k The communicating nervous filaments, passing obliquely from the lowest filaments of one nerve to the highest of the other; where it is to be remarked, that they are not sufficiently well expressed, because that portion of each of them which runs along with the nerve next above is not exposed to view, but only the communicating twig.
- K. K The ninth or last pair of nerves of the brain, consisting of four different filaments on each side. Those on the right side unite, and pass through a common hole of the dura mater; but on the left they pass through two distinct holes, at a little distance from one another.
- L The origin of the denticulated ligament, or its first adhesion to the dura mater, from which downwards all its tooth-like processes are viewed in their proper order l. l inserted into the dura mater at the interstices between the nerves; but they are only represented on one side.
- M. M The corpora pyramidalia postica } in some measure represented.
- N. N The corpora olivaria postica }
- O. O The vertebral arteries going out at their proper foramina with the nerve 1. P (1. C.)
- m. m Nervous filaments coming from the fore-part of the medulla, and with others from behind, passing through the holes of the dura mater. They are exposed to view here and there, but not perfectly 23).
- n The place where the nervous filaments begin to run together, and where the basis of the cauda equina is formed. There the remaining portion of the medulla ceases to appear in its natural situation.
- o The place where the nervous filaments cease to arise.
- p. p The origin of the filaments 24, which compose the cauda equina, and arise from the medulla spinalis. These filaments are turned a little back on each side, in order that the nature and figure of the medulla lying in the middle might be sufficiently displayed.
- q. q. q The cauda equina.
- 1 as far as 30 The posterior origins of the thirty pair of vertebral nerves, together with their exits through the dura mater.
- 1. C to 8. C The nervous filaments of the eighth pair of cervical nerves. Observe, that there are two filaments of the first pair of nerves on the right side, blended with the accessory nerve, from which, a little higher up, at the place of the posterior origin of the first pair, a filament goes to the foramen of the vertebral artery 25).
- 1. D to 12. D The twelfth pair of dorsal nerves.
- 1. L to 5. L The five pair of lumbar nerves.
- 1. S to 5. S The five pair of sacral nerves.

The

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The eight following figures are all taken from Vieussens's neuro-graphia universalis, reduced to a lesser scale, and represent a compleat system of the nerves which arise from the medulla spinalis, and are distributed to the various parts of the body.

FIGURE IX.

This figure (which makes Tab. 29. of Vieussens) represents the distribution of the eighth pair of nerves, and of the two intercostals.

- A The trunk of the fifth pair of nerves.
- B The large anterior branch of the fifth pair.
- C The large posterior branch of the same fifth pair.
- D The trunk of the sixth pair.
- a. a The trunk of the intercostal nerve.
- E The trunk of the eighth pair.
- b The accessory nerve, which at its going out of the cranium, is included in the same common coat with the nerve of the eighth pair, and therefore seems to be blended with it. But presently after it has got out, it parts from the other, to run on to Θ. Θ. Θ.
- c The ninth pair of nerves.
- d Branches of the ninth pair, which are bestowed upon the glands behind the maxillæ.
- e The tenth pair of nerves.
- f A branch of the fifth pair, which is distributed to the tongue, except those twigs of it g. g. g. which are bestowed upon the maxillary glands.
- h A branch of the portio dura of the seventh pair, which unites itself with the branch f of the fifth pair, and together with it is distributed through the tongue.
- i The first pair of cervical nerves.
- k A small branch of the first pair of cervical nerves, which unites itself with the branch f of the above fifth pair, and together with it is distributed through the tongue.
- l A small branch of the same first pair of cervical nerves, of which the twig m is united with the second pair of cervicals. But the twig n is bestowed upon the oblique muscles of the head.
- o A small twig, by the interposition of which a communication is made between the eighth pair and the portio dura of the seventh.
- p A branch of the eighth pair, of which the twig q is united with the upper cervical gangliform plexus of the intercostal nerve, and afterwards is inserted into the long muscle of the neck. But the twig r bestows its fibrils upon some of the muscles of the larynx, pharynx, and os hyoidis, as was mentioned above, in describing the eighth pair.
- s A twig of the branch p, represented here a little thicker in proportion than it naturally is, and united with the recurrent nerve.
- F. F The thyroid cartilage, making the fore-part of the trachea.
- G. G The trachea cut transversely, a little above the lungs.
- H The cervical gangliform plexus of the eighth pair of nerves, to which a branch of the first pair of cervicals sends off a twig.
- t A branch of the eighth pair, of which the twigs u. u here cut off, are joined with the second pair of cervicals, and the rest are bestowed upon the scalenus, mastoideus, coracohyoideus, sternohyoideus, and sternothyroides muscles, and to the neighbouring teguments, excepting some which twist round the vessels of the neck, especially the jugular veins, and terminate in the neighbouring membranes.
- I The gangliform thoracic plexus of the eighth pair of nerves.
- x The right recurrent nerve.
- y A branch of the eighth pair on the left side, which besides sending off the left recurrent nerve, distributes the twig z to the upper cardiac plexus, and the twig 2 to the heart, and its left auricle.
- 3 A twig of the one 2, which is spent upon the heart, towards the left side.
- 4 Another twig of the same, which is distributed to the left auricle.
- 5 A branch of the eighth pair on the right side, which sends off the twig 6 to the coats of the aorta.
- 7. 7 Twigs of the branch 5 cut off, which are spent upon the internal substance of the lungs.
- 8 A twig of the same branch 5, which terminates in the upper cardiac plexus.
- 9 The trunk of the branch 5, of which the twig 10 is inserted into the right side of the pericardium, behind the heart; but the twig 11 furrounds the descending vena cava in the form of a ring, where it opens into the upper part of the right auricle of the heart, and terminates in it, after sending off the twigs 12. 12. 12 to the abovesaid right auricle.
- 13. 13 Branches of the eighth pair of nerves, whose twigs, which are here represented cut off, being complicated together, form the pulmonary plexuses.
- 14 A twig of the eighth pair on the right side, which is bestowed upon the left auricle of the heart.
- 15. 15. 15 Twigs of the eighth pair on the left side, bestowed partly upon the coats of the œsophagus, and partly upon the heart.
- 16. 16 Two small gangliform plexuses, which are sometimes observed in the left trunk of the eighth pair.
- 17 The division of the left trunk of the eighth pair into three branches, which presently unite again into the same trunk.

18. 18 The eighth pair of nerves emerging behind the heart, and communicating together by means of the branch 19.

20. 20 Twigs of the eighth pair, which are spent upon the upper orifice of the stomach.

21. 21 Three branches of the eighth pair on the right side, communicating with one another, which after sending off the twigs 22. 22. 22. &c. to the upper and back part of the stomach, are joined towards the pylorus, with some small twigs from the right gangliform femilunar plexus, and together with these form the hepatic plexus 60. 60.

23 A small branch of the eighth pair on the right side, the twigs of which are sent to the upper and fore-part of the stomach, except those 24, which terminate partly in the pylorus, partly in the pancreas, and in the biliary ducts of the liver.

25 The left trunk of the eighth pair, here represented a little smaller in proportion than is natural; which being divided into several branches below the diaphragm, and united with the twigs 26, going from the left femilunar gangliform plexus, together with these forms the stomachic plexus, and at last terminates in the mesenteric plexuses.

27 A branch of the eighth pair on the left side, which I call the interior branch. This sends its twigs to the lower part of the stomach, excepting those 28. 28, which terminate in the pylorus.

K The anterior surface of the heart, freed from the pericardium and blood-vessels.

L The right auricle of the heart.

M The left auricle.

N The descending vena cava, cut away near the right auricle.

O The ascending vena cava, cut off a little above the diaphragm.

P The pulmonary artery, cut off near its origin.

Q. Q The trunk of the aorta divided into two, represented a little separated from each other, in order to allow the upper cardiac plexus, interposed between the aorta and the trachea, to appear.

R The right branch of the ascending trunk of the aorta.

S The origin of the right carotid artery, which is here cut off.

T The origin of the right vertebral artery, here likewise cut off.

V The right vertebral artery cut off.

X The left branch of the ascending aorta, which immediately divides into two smaller ones; the interior and lesser of which Y, forms the left carotid artery, while the exterior and larger, terminates in the left vertebral artery Z, and in the left axillary artery, &c.

+ The descending trunk of the aorta.

ψ The upper cervical gangliform plexus of the intercostal nerve.

Δ A small nerve emerging from the upper cervical gangliform plexus of the left intercostal, which by means of two twigs 29. 29, communicates with the eighth pair of nerves on the left side, and running downwards, it reaches to the anterior part of the pericardium, and is spread out upon it.

30 The above nerve Δ cut off near the basis of the heart.

31. 31. 31 Twigs of the intercostal nerve, which are spent upon the muscles of the neck, viz. the longus and scalenus.

32 A small branch of the intercostal nerve, which is inserted into the gangliform thoracic plexus.

33 A twig of the intercostal nerve, which twists round the external jugular vein, and terminates in the neighbouring membranes.

▽ The inferior gangliform cervical plexus of the intercostal nerve.

34 A small branch, arising from the inferior gangliform cervical plexus of the right intercostal nerve, which running downwards, perforates the pericardium, after which receiving a small nerve from the upper cardiac plexus, it sends off the twig 35 to the coats of the aorta, and at last climbing over the trunk of the pulmonary artery, it divides into the twigs 36. 36. &c. which run upon the fore-part of the heart.

37 The thoracic gangliform plexus of the intercostal nerve.

38 A small nerve emerging from the lower part of the thoracic gangliform plexus of the right intercostal, which is inserted into the eighth pair on the right side.

39. 39 Two small branches going from the lower part of the thoracic gangliform plexus of the left intercostal, the upper of which sends off three twigs, of which the highest 40. 40 here cut off, are distributed to the œsophagus and the trachea arteria, while the third 42 joins in with the left trunk of the eighth pair of nerves. The lower branch 39 sends the twig 41, which is here cut off, to the œsophagus; and at last the two branches 39. 39, having sent off the above-mentioned twigs, bend in towards the middle of the breast, and as soon as they have reached the back part of the aorta, they are divided into several smaller ones communicating with one another, and together with some twigs of the eighth pair, with which they are blended, they form a remarkable nervous plexus 43.

43 The upper cardiac plexus, which is much larger than the lower.

44. 44. 44 Twigs emerging from each side of the upper cardiac plexus, which are distributed through the internal substance of the lungs, and the glands in the upper part of them, situated behind the trachea.

45. 45. 45 Twigs going out from the upper cardiac plexus, which as well as those 44. 44. &c. are represented cut away, and are spent upon the pericardium.

* A small nerve emerging from the right side of the upper cardiac plexus, which joins in with the slender branch 34, and together with it is sent to the fore-part of the heart.

46 A twig going from the left side of the upper cardiac plexus, which unites itself with the twig 2 of the branch y.

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47. 47 Small branches going out from the upper cardiac plexus, which are spent upon the coats of the aorta.

48 Branches going from the lower part of the upper cardiac plexus, which are bestowed upon the back part of the pericardium, and the region of the heart.

49 Two small branches going likewise from the lower part of the upper cardiac plexus, and uniting together, which after sending off the twig 50 to the coats of the aorta, form the lower cardiac plexus 51, and at last with their extremities 52, surround the pulmonary artery in the manner of a ring.

53 A small branch going from the upper cardiac plexus, which is distributed to the left auricle of the heart, and is joined with the twig 4 of the small nerve 2.

54. 54 Twigs arising from the interior side of the intercostal nerve, and distributed to the membranes upon the vertebræ of the back.

55. 55. 55. &c. Twigs arising from the same interior side of the intercostal nerve, and going to the gangliform semilunar plexus 57 on each side.

56. 56. 56. 56 Twigs of the intercostal nerve, which together with the others 54. 54, terminate in the membranes lining the vertebræ of the back.

57 The semilunar gangliform plexus of the intercostal nerve.

58 A small branch sent from the semilunar gangliform plexus of the right intercostal, which running upwards, is bestowed partly upon the fleshy, and partly upon the tendinous substance of the diaphragm.

59. 59 Twigs arising from the upper part of the semilunar gangliform plexus of the right intercostal, of which the three lower and smaller are bestowed upon the gall-bladder, the biliary ducts, the pylorus, duodenum and pancreas; and the three upper, uniting together, terminate in the hepatic plexus.

60. 60 The hepatic plexus, produced from the right intercostal nerve, and the right trunk of the eighth pair.

61. 61 Twigs sent from the lower part of the semilunar gangliform plexus of the right intercostal nerve, which terminate in the mesenteric plexuses.

62. 62 Nervous filaments, which are spread upon the membranes lining the vertebræ of the loins.

63 The stomachic plexus, composed of some twigs from the right trunk of the eighth pair, and others from the gangliform semilunar plexus of the left intercostal nerve.

64 Small branches going from the gangliform semilunar plexus of the left intercostal nerve, which being reflected upwards, and communicating with one another, compose the splenic plexus.

65. 65 Twigs arising from the stomachic plexus, and terminating in the mesenteric plexuses.

66. 66. 66. 66 Nervous filaments, which are bestowed upon the membranes lining the vertebræ of the loins, and the parts contiguous.

67 A small branch sent from the inner side of the intercostal nerve, which on the right side is spent upon the right renal plexus, and on the left upon the left semilunar gangliform plexus.

68 A twig of the small right branch 67, which is bestowed upon the membranes surrounding the right kidney.

69 The trunk of the same right branch 67, which uniting with the lower exterior twig of those 55. 55. &c. on the right side, forms with it a kind of net work, and at last together with it composes the right renal plexus 70. 70.

70. 70 The right renal plexus.

71 The interior twig of the small nerves 55. 55. &c. of the right side, which is spent upon the membranes covering the right kidney; excepting those little filaments of it 72. 72. 72, which with the other neighbouring ones 72. 72. 72, are bestowed upon the membranes adjacent to the right kidney.

73 Two small filaments of the little left branch 67, which are distributed to the membranes covering the left kidney.

74. 74 The left renal plexus, composed of three little branches sent off from the left gangliform semilunar plexus.

75 A small branch going from the left gangliform semilunar plexus, which is spent upon the membranes covering the left kidney; excepting those little filaments of it 76. 76. 76, which, together with some other neighbouring ones, are bestowed upon the membranes adjacent to the left kidney.

77. 77 The upper mesenteric plexus.

78. 78 The middle mesenteric plexus.

79. 79 The lower mesenteric plexus.

80. 80 The upper twigs of the lower mesenteric plexus, which are bestowed upon the membranes lining the lower vertebræ of the loins.

81. 81. 81. &c. The lower twigs of the same mesenteric plexus, which are spent upon the membranes lining the os sacrum, upon the coats of the rectum, the bladder, the ovaria, and uterus.

82. 82. 82. &c. The gangliform plexuses in the form of a barley corn, which the intercostal nerve receives in the cavity of the abdomen.

83. 83. &c. Small branches which the intercostal nerve sends off to the mesenteric plexuses.

84. 84. &c. Small twigs of the intercostal nerve, which together with those 85. 85, and the others 87. 87, are bestowed upon the ureters, the rectum, with its levator muscles, the ovaria, the uterus, the bladder, and its sphincter, the vesiculæ feminales, the prostates, and the sphincter of the anus.

86 A small branch, by means of which the intercostal nerves communicate together near the extremity of the os sacrum.

88. 88. 88. &c. The gangliform plexuses of the spinal nerves, which are wanting in the first, twenty-eighth, twenty-ninth, and thirtieth pairs.

89. 89. 89. &c. Small branches which the spinal nerves send off to the intercostal, at each internode of the vertebræ.

90 A nerve here cut away, the distribution of which is explained in figure 13.

91. 91. &c. Small branches which the intercostal nerve sends off to the dorsals.

92 A considerable branch of the intercostal nerve, which unites itself with the first of the nerves of the os sacrum, and together with it terminates in the posterior crural nerve.

93. 93. 93. &c. Twigs of the spinal nerves, the distribution of which is explained in the figures 10. 13 and 14.

94 The phrenic nerve, arising from the fourth pair of cervicals.

95 A twig of the phrenic nerve, which is bestowed upon the muscles of the neck, viz. the transversalis, and the spinatus.

96 A small branch of the sixth pair of cervical nerves, which is inserted into the phrenic.

97 A twig of the phrenic nerve, which is united with one sent off from the second pair of dorsals, and afterwards is blended with the intercostal.

98 The phrenic nerve cut off.

99 A twig of the brachial nerves, the distribution of which, as well as of the phrenic, will be explained in the next figure.

100 A nerve cut away, which is composed of two twigs sent off from the sixth and seventh pair of cervical nerves. The distribution of this likewise will be explained in the next figure.

101 The common sheath of the brachial nerves cut through.

102 The kidney, which is a little higher in the left side than in the right.

103 A considerable branch of the lowest of the lumbar nerves, which unites itself with the first pair of nerves of the os sacrum, and helps to form the posterior crural nerve.

104. 104. 104. &c. The five pair of nerves of the os sacrum, the distribution of which is explained Fig. 15.

105 The posterior crural nerve cut away, the distribution of which will be explained in its proper place.

FIGURE X.

This figure represents seven pair of the cervical and dorsal nerves. It is taken from Tab. 24. of Vieussens.

A. A That part of the spinal marrow which lies within the seven vertebræ of the neck, and the two uppermost of the back.

B The first pair of cervical nerves cut off, the distribution of which see in the preceding figure.

a. a. a. a. &c. The gangliform plexuses of the six inferior cervical nerves.

b. b The gangliform plexuses of the two superior dorsal nerves.

c. c. c. c. &c. Twigs of the six inferior cervical nerves, and of the first pair of dorsals, which are bestowed upon the muscles of the neck, viz. the transversalis, and spinatus, and also the longissimus.

d. d. d. d. &c. Small branches cut away, which the six inferior cervical nerves, and the two superior dorsals, send off to the intercostal.

e. e Two twigs cut off, by means of which the second cervical nerves communicate with the eighth pair.

f. f. f Three pair of cervical nerves, viz. the second, third, and fourth, which are united together by means of the small branches g. g. g. g.

h. h Two small branches of the second pair of cervical nerves, which being reflected upwards, are distributed to the ear and its muscles, the parotids, and integuments of the hind-head.

i A small branch of the same second pair of cervicals, which is spent upon the trapezius, and the neighbouring integuments.

k A twig of the same, which is inserted into the external jugular vein.

l. l. l. l. &c. Small branches of the second, third, and fourth cervical nerves, which are sent to some of the muscles of the neck, viz. the transversalis, and spinatus; and of the head, viz. the splenius, the complexus, the small and thick muscles, the rectus major, and minor, the superior oblique, and the inferior oblique; as likewise of the shoulder-blade, viz. the trapezius, rhomboides, and the levator scapulæ.

m A branch of the fourth pair of cervical nerves, terminating in the phrenic.

n. n. n The three inferior cervical nerves, which together with the two superior dorsals o. o, go to form the brachial nerves.

p A branch sent off from the fifth cervical nerve, of which the twig q, passing through a foramen of the scapula r, is spent upon the supraspinatus muscle, and the twig s upon the subclavian muscle, and the coracobrachialis.

T A small branch of the sixth cervical nerve, which terminates in the phrenic.

u Another small branch sent off from the same sixth cervical, which uniting with the branch X of the seventh, forms the common trunk 2 here cut off, which sends its branches to some of the muscles upon the thorax, viz. the serratus anticus major, and minor, as likewise the pectoral, and the neighbouring integuments.

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1 The phrenic nerve, here likewise cut off. It sometimes sends off small twigs to the pericardium, and then is distributed through the substance of the diaphragm.

C. D The sheaths of the nerves n. n. n and o. o laid open, from which the brachial nerves emerge, as you may see in the two following figures.

3 A branch going out from the sheath C. D, which is spent upon the ferratus anticus minor, and the teguments covering it.

4 The thoracic gangliform plexus of the intercostal nerve.

5 A small branch sent off from the above said gangliform plexus, which uniting with another small one 7, going from the second of the dorsals, forms a nerve, the distribution of which is explained Fig. 13.

FIGURE XI.

This figure represents the nerves of the left arm, the hand lying supine. It is taken from Vieussens, Tab. 25.

A The sheath of the brachial nerves, which is composed of their common external covering laid open.

1. 1. 1 Three small branches going out from the sheath of the brachial nerves, which are spent upon the subscapularis muscle, excepting some twigs, which are inserted into the ferratus major at its origin.

2 Another small branch going out from the sheath of the brachial nerves.

3. 3 Twigs of the small branch 2, which are spent upon the teres minor muscle.

4. 4 Other twigs of the same small branch 2, which are distributed to the axillary glands, and to the membranes and fat about them.

5. 5 More twigs of the same small branch 2, which are inserted into the ferratus major muscle.

6. 6. 6 Still more twigs of the same small branch 2, which terminate in the latissimus dorsi, and the teres major muscle.

7 A small branch going out from the sheath of the brachial nerves, which sends off the twig 8 to the axillary glands, and afterwards running down upon the muscles on the inside of the arm, viz. the longus, and brevis, (i. e. the long and short heads of the triceps) it reaches as far as the fore-arm, sending off in its course twigs to the above muscles, and to the cellular membrane.

9 The last small branch sent off from the sheath of the brachial nerves, which is distributed to the axillary glands, and to the membranes about them.

B The first brachial nerve, which goes out from the back part of the sheath, and divides into the two branches C and D.

10. 10. 10 Twigs of the branch C, some of which are bestowed upon the infraspinatus muscle, some upon the teres major, and some upon the heads of the longus and brevis muscles.

11. 11 Twigs of the branch D, which terminate in the deltoid muscle.

12. 12 The other twigs of the branch D, which are sent to the teguments upon the upper and external part of the left arm.

E The second brachial nerve, which runs down as far as the hand.

F. F The axillary artery accompanied with the vein, and surrounded as it were by the brachial nerves.

G A portion of the coracobrachialis muscle, which the nerve E first perforates.

13. 13. 13 Twigs which the nerve E sends off to the above muscle.

14 A twig of the nerve E, which is dispersed through the middle of the belly of the biceps.

15 A small branch of the nerve E, whose twigs 16. 16. 16 are distributed through the biceps, but the one 17. 17, after sending off some filaments to the brachialis internus muscle, terminates in several small twigs, which are inserted into the teguments at the bending of the fore-arm.

18 Another small branch of the nerve E, which passing under the head of the supinator longus, sends off several twigs to it, and afterwards terminates in the external cubital muscle.

19. 19. 19 Twigs of the nerve E, which are bestowed upon the cellular membrane, and the other integuments.

20. 20. 20. &c. Small twigs of the nerve E, the superior of which are lost in the integuments; the middle ones about the joint of the wrist, are bestowed upon the neighbouring membranes, and the ligaments connecting the radius and ulna with the bones of the carpus, while the lowermost run down upon the hand itself, and are lost in the teguments; from which you may easily understand, that it is here represented somewhat shorter than it ought to be.

H The third brachial nerve.

21 A twig of the nerve H, which is spent upon the pronator teres of the radius.

22 Another twig of the nerve H, the upper filaments of which 23. 23 are bestowed upon the pronator teres just mentioned, and the others 24. 24 passing under the sublimis, are inserted into the profundus.

25 A third twig of the nerve H, whose filaments terminate chiefly in the radius internus, only some of them are sent to the sublimis, and some to the palmaris.

26 A small twig of the nerve H, which is spent upon the sublimis.

27 A small branch of the nerve H, of which the twig 28 passing by the flexor muscle of the fore-finger, sends off the filament 29 to it, and then terminates in the profundus.

30 A twig of the small branch 27, which enters the flexor of the thumb, and is dispersed through it.

31. 31 Two more twigs of the same small branch 27, which are spent upon the flexor of the fore-finger.

32 Another twig of the small branch 27, which is sent to the flexor of the thumb.

33. 33 The last filaments of the same 27, which are bestowed upon the quadratus muscle.

34 A small branch of the nerve H, the twigs of which being interwoven together, form a small plexus, which lies under the broad tendon of the palmaris muscle, and send off several fibres to the skin upon the palm of the hand.

I The division of the nerve H below the annular ligament, into the interior, and the exterior branch.

35 The exterior branch of the division I.

36. 36 The exterior small branch of the one 35, whose twigs are sent to the teguments upon the external lateral part of the thumb, excepting those small ones 37. 37, which are sent to the abductor of the thumb, and another muscle placed under the tendon of its great flexor, which several anatomists look upon as its second flexor; but I am of opinion with that celebrated anatomist Riolan, that it is rather the second abductor, or a portion of the first.

38. 38 The middle small branch of the one 35, which is bestowed upon the internal lateral part of the thumb, and the teguments covering it.

39 A twig of the small branch 38. 38, which is inserted into the adductor of the thumb.

40. 40 The interior small branch of the one 35, which is spent upon the inside of the fore-finger next the thumb.

41 A twig of the small branch 40. 40, which is bestowed upon the first lumbricalis muscle, whose tendon is inserted into the finger.

42. 42 Two twigs of the small branch 40. 40, which are dispersed through the adductor muscle of the thumb. As to the rest of the twigs of the same 40. 40, they are all distributed to the teguments of the fore-finger.

43 The interior branch of the division I.

44 A twig of the branch 43, which is sent to the interosseous muscles.

45 A small branch of the one 43, of which the twig 46 is bestowed partly upon the internal interosseous muscle, and partly upon the second lumbrical; but the twigs 47. 47 are sent partly to the fat and teguments of the fore-finger, and the middle finger, and partly to the second lumbricalis muscle.

48. 48 A twig of the small branch 45, whose fibres are dispersed upon the inside of the fore-finger, next the middle finger.

49. 49 Another twig of the small branch 45, the fibres of which are dispersed upon the inside of the middle finger, next the fore-finger.

50 Another small branch of the one 43, the fibres of which 51. 51. 51, terminate partly in the third lumbricalis muscle, and partly in the internal interosseous, which lies under the lumbricalis, when the hand is in a supine posture.

52. 52 A twig of the small branch 50, which after sending off the fibre c to the teguments between the middle and the ring finger, is spent upon the inside of the middle finger, next the ring finger.

53. 53 Another twig of the small branch 50, which after sending off the fibres d. d to the teguments between the middle finger and the ring finger, is distributed to the inside of the ring finger, next the middle finger.

K The fourth brachial nerve.

54. 54. 54 Three twigs of the nerve K, which are spent upon the short head of the triceps, which the above said nerve K penetrates near its extremity.

55. 55 At this place the nerve K passing behind the fore-arm, between the olecranon and the internal apophysis of the os humeri, lies under the tendons of the long and short heads of the triceps.

56. 56. 56 Twigs of the nerve K, which are bestowed upon the adipous membrane, and the other integuments.

57. 57 Twigs, which the nerve K towards the bending of the fore-arm sends off to the head of the internal cubital muscle.

58. 58. 58 Twigs of the nerve K, which are distributed to the internal flexor of the wrist.

59 A twig of the nerve K, which is inserted into the head of the profundus muscle.

60 Another twig of the nerve K, which sends off fibres to the artery and vein which it accompanies, and afterwards is spent upon the musculus quadratus, the membranes upon the carpus, and the annular ligament.

b A branch of the nerve K cut off, which is sent to the upper part of the hand, together with the nerve M which is cut off at a, as you will see in the next figure.

61 The trunk of the nerve K, which lying upon the musculus profundus, goes almost as far as the wrist before it divides, and there, together with the vein which attends it, it gets a new covering, which it presently lays down again.

L The division of the nerve K, into the interior and exterior branch.

62 The interior branch of the division L, of which the twigs 63. 63. 63 are sent to the fourth lumbricalis muscle, and the internal interosseous, which lies under the lumbricalis, when the hand is in a supine posture.

64. 64 A twig of the interior branch 62, which together with its fibres is distributed to the inside of the ring finger, next the little finger.

65. 65 Another twig of the interior branch 62, which sends its fibres to the inside of the little finger, next the ring finger.

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66 The exterior branch of the division L, of which the twigs 67. 67. 67. 67 are distributed to the abductor of the little finger, and the teguments covering it, while the rest are spent upon the outside of the same finger.

M The fifth brachial nerve.

68 A twig of the nerve M, which is distributed to the cellular membrane and the integuments.

69 A twig of the nerve M, which enters the head of the longus muscle, (or the long head of the triceps) and terminates in it.

70 Another twig of the same M, which terminates partly in the brevis muscle (or the short head of the triceps) and partly in the brachialis internus.

71. 71 A small branch of the nerve M, which running along with it towards the outside of the arm, perforates the longus muscle near its extremity, giving off lateral fibres to it, and at last terminates in the skin.

72. 72 Another small branch of the nerve M, which in the same manner as the one 71. 71, perforates the longus muscle, sending likewise off little twigs to it, and afterwards runs to the outside of the arm, going as far down as the carpus, where it is lost in the teguments, especially the skin.

N The nerve M, which together with its small branches 71. 71. and 72. 72, runs under the other nerves E, H and K, as also the os humeri, and gets to the outside of the arm.

73 A twig of the nerve M, which is inserted into the head of the supinator longus, above the external apophyse of the os humeri, and terminates in it.

74 Another twig of the same nerve M, which is bestowed upon the first extensor of the carpus, or the external radius muscle.

75. 75 Two twigs of the nerve M, going to the supinator brevis.

76 A small branch of the nerve M, which passes through the supinator brevis, and as soon as it gets out of it divides into two branches, one of which 77, terminates in the second extensor of the thumb; while the other 78, sends off its upper twigs to the great extensor of the fingers, and likewise to the proper extensor of the little finger, and the lower ones to the great extensor of the thumb, and the proper extensor of the fore-finger.

79 A twig of the same nerve M, which is spent upon the first extensor of the carpus, or the radius externus muscle.

a The nerve M cut off, which being connected by means of certain little membranes to the first supinator muscle, runs along with the twig 79, almost to the extremity of the radius, and together with the branch b, is continued to the external and upper part of the hand, as you will see in the following figure.

O The sixth brachial nerve, which is distributed to the sheaths of several of the muscles, the cellular membranes, and the skin upon the whole inside of the arm, as far as the wrist itself.

80. 80 The junction of the two branches of the nerve O, which is sometimes wanting.

FIGURE XII.

This figure represents the nerves of the right arm, the hand lying prone. It is taken from Vieussens, Tab. 26.

A The sheath of the brachial nerves, which is composed of their common external covering, laid open.

1. 1. 1 Three small branches going out from the sheath of the brachial nerves, which are spent upon the subscapularis muscle, excepting some twigs which are inserted into the serratus major at its origin.

2 Another small branch, going out from the sheath of the brachial nerves.

3. 3 Twigs of the small branch 2, which are spent upon the teres minor muscle.

4. 4 Other twigs of the same small branch 2, which are distributed to the axillary glands, and to the membranes and fat about them.

5. 5 More twigs of the same small branch 2, which are inserted into the serratus major muscle.

6. 6. 6 Still more twigs of the same small branch 2, which terminate in the latissimus dorsi, and the teres major muscle.

7 A small branch going out from the sheath of the brachial nerves, which sends off the twig 8 to the axillary glands, and afterwards running down upon the muscles on the inside of the arm, viz. the longus and brevis, (i. e. the long and short heads of the triceps) it reaches as far as the fore-arm, sending off in its course twigs to the above muscles, and to the cellular membrane.

9 The last small branch sent off from the sheath of the brachial nerves, which is distributed to the axillary glands, and to the membranes about them.

B The first brachial nerve, which goes out from the back part of the sheath, and divides into the two branches C and D.

10. 10. 10 Twigs of the branch C, some of which are bestowed upon the infraspinatus muscle, some upon the teres major, and some upon the heads of the longus and brevis muscles.

11. 11 Twigs of the branch D, which terminate in the deltoid muscle.

12. 12 The other twigs of the branch D, which are sent to the teguments upon the upper and external part of the right arm.

E The second brachial nerve, which runs down as far as the hand.

F The axillary artery accompanied with the vein, and surrounded as it were by the brachial nerves.

G A portion of the coracobrachialis muscle, which the nerve E first perforates.

13. 13. 13 Twigs, which the nerve E sends off to the above muscle.

14 A twig of the nerve E, which is dispersed through the middle of the belly of the biceps.

15 A small branch of the nerve E, whose twigs 16. 16. 16 are distributed through the biceps, but the one 17. 17, after sending off some filaments to the brachialis internus muscle, terminates in several small twigs, which are inserted into the teguments at the bending of the fore-arm.

18 Another small branch of the nerve E, which passing under the head of the supinator longus, sends off several twigs to it, and afterwards terminates in the external cubital muscle.

19. 19. 19 Twigs of the nerve E, which are bestowed upon the cellular membrane, and the other integuments.

20 A small twig of the nerve E, sent likewise to the integuments.

a The nerve E cut off. For the distribution of it, see the preceding figure.

H The third brachial nerve.

21 A twig of the nerve H, which is spent upon the pronator teres of the radius.

22 Another twig of the nerve H, the upper filaments of which 23. 23 are bestowed upon the pronator teres just mentioned, and the others 24, passing under the sublimis, are inserted into the profundus.

25 A third twig of the nerve H, whose filaments terminate chiefly in the radius internus, only some of them are sent to the sublimis, and some to the palmaris.

26 A small twig of the nerve H, which is spent upon the sublimis.

27 A small branch of the nerve H, of which the twig 28 passing by the flexor muscle of the fore-finger, sends off the filament 29 to it, and then terminates in the profundus.

30 A twig of the small branch 27, which enters the flexor of the thumb, and is dispersed through it.

31. 31 Two more twigs of the same small branch 27, which are spent upon the flexor of the fore-finger.

32 Another twig of the small branch 27, which is sent to the flexor of the thumb.

33 A very small twig of the same branch 27, which is bestowed upon the quadratus muscle.

b The nerve H cut off. See the further distribution of it in the preceding figure.

c The small branch 27 cut off. The further distribution of which see likewise in the preceding figure.

I The fourth brachial nerve.

34. 34. 34 Three twigs of the nerve I, which are spent upon the short head of the triceps, which the above said nerve I penetrates near its extremity.

35 At this place the nerve I passing behind the fore-arm, between the olecranon and the internal apophysis of the os humeri, lies under the tendons of the long and short heads of the triceps.

36. 36. 36 Twigs of the nerve I, which are bestowed upon the cellular membrane, and the other integuments.

37. 37 Twigs sent off from the nerve I, to the head of the internal cubital muscle, near the bending of the fore-arm.

38. 38. 38 Twigs of the nerve I, which are distributed to the internal flexor of the wrist.

39 A twig of the nerve I, which is inserted into the head of the profundus muscle.

40 Another twig of the nerve I, which sends off fibres to the artery and vein which it accompanies, and afterwards is spent upon the musculus quadratus, the membranes upon the carpus, and the annular ligament of the wrist.

d The twig 40, here cut off. See the farther distribution of it in the preceding figure.

e The trunk of the nerve I cut off. The further distribution of which see likewise in the preceding figure.

41 A branch of the nerve I, which is cut off in the preceding figure, and marked b.

42. 42 Twigs of the branch 41, sent to the abductor muscle of the little finger.

43 A twig of the same branch 41, which is spent upon the teguments on the back part of the metacarpus.

44. 44. 44. 44. &c. More twigs of the branch 41, which terminate in the teguments on the back of the hand.

45. 45 A twig of the branch 41, which is spent upon the back part of the little finger, next the ring finger.

46. 46 Another twig of the same branch 41, which together with its fibres, is spent upon the back part of the little finger, next the ring finger.

47. 47 Still another twig of the branch 41, which is bestowed upon the back part of the ring finger, next the little finger.

48. 48. 48 Small fibres of the nerve 41, which are sent to the interosseous muscles, and the integuments on the back part of the metacarpus.

49. 49. 49 More fibres of the nerve 41, which are sent to the teguments on the back part of the metacarpus.

50. 50 A twig of the branch 41, which is sent to the back part of the ring finger, next the middle finger.

51. 51 The last twig of the branch 41, which is sent to the back part of the middle finger, next the ring finger.

K The fifth brachial nerve.

52 A fibre of the nerve K, which is bestowed upon the cellular membrane, and the other integuments.

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53. 53 More fibres of the nerve K, which are spent upon the head of the longus muscle, (*or long head of the triceps*) and terminate in it.

54. Another fibre of the nerve K, which is bestowed partly upon the short head of the triceps, and partly upon the brachialis internus muscle.

55. 55 A small branch of the nerve K, which running towards the outside of the arm, together with the nerve, perforates the longus muscle, near its extremity, sending off fibres to it, and at last is spread out upon the skin.

56. 56 Another small branch of the nerve K, which in the same manner as the small branch 55. 55, perforates the longus muscle, and sends off fibres to it; after which running on to the outside of the arm, and down as far as the metacarpus, it terminates in the teguments, and especially in the skin.

57. A twig of the nerve K, which is inserted into the head of the long supinator muscle, above the external apophyse of the os humeri, and terminates in it.

58. Another twig of the nerve K, which is bestowed upon the first extensor of the carpus, or the external radial muscle.

59. Another twig of the same nerve K, which is sent to the short supinator muscle.

60. A small branch of the nerve K, which passes through the short supinator muscle, and as soon as it emerges, it divides into two branches; one of which, viz. 61, is spent upon the second extensor of the thumb, while the other 62, sends off its upper twigs to the common extensor of the fingers, and also to the proper extensor of the little finger; and the lower ones to the first extensor of the thumb, and to the proper extensor of the fore-finger.

63. A twig of the nerve K, which is bestowed upon the first extensor of the carpus, or the external radial muscle.

64. 64 The trunk of the nerve K, which being connected by means of some very thin membranes to the first supinator muscle, runs down with the twig 63, almost as far as the end of the radius, and together with the branch 41, is bestowed upon the upper and back part of the hand.

65. 65 A small branch of the nerve K, the upper and larger twig of which 66, is inserted into the abductor muscle of the thumb, while the rest are sent to the teguments on the back of it.

67. A small branch of the nerve K, sent to the teguments on the upper and back part of the thumb, and going as far as the second joint of the thumb. This sometimes arises from the small branch 65. 65.

68. 68 A small branch of the nerve K, of which the twig 69 is bestowed upon the antithenar muscle, and the rest are spread upon the back part of the thumb laterally, next the fore-finger.

70. A twig of the nerve K, which is spent upon the teguments on the back of the hand.

71. 71 More twigs of the nerve K, which are bestowed partly upon the antithenar muscle, and partly upon the teguments on the back of the hand.

72. 72 A small branch of the nerve K, which together with its twigs, is distributed to the back part of the fore-finger laterally, next the thumb.

73. A branch of the nerve K, whose twigs 74. 74. 74 are sent to the back of the hand, and the external interosseous muscles.

75. 75 Twigs of the nerve K, which are inserted into the teguments on the back of the hand.

76. 76 A twig of the branch 73, which together with its fibres, is bestowed upon the back part of the fore-finger laterally, next the middle finger.

77. 77 Another twig of the branch 73, which, together with its fibres, is bestowed upon the back part of the middle finger laterally, next the fore-finger.

L. The sixth brachial nerve, which is sent to the sheaths of several of the muscles, to the cellular membrane, and to the skin upon the whole inside of the arm, as far down as the wrist.

78. The conjunction of two branches of the nerve L, which is sometimes wanting.

FIGURE XIII.

This figure represents the dorsal nerves, and is taken from Vieussens, Tab. 27.

A. A That portion of the spinal marrow which is contained within the vertebræ of the back.

B The gangliform thoracic plexus of the intercostal nerve.

a A small branch going out from the above thoracic plexus, which joins itself to another small branch sent from the second dorsal plexus, and together with it forms the nerve E, which in Fig. 9. and 10 is cut off.

C. C. &c. The gangliform plexuses of the dorsal nerves, the two uppermost of which go to the brachial nerves, as you may see Fig. 10.

D The second dorsal nerve cut off.

E A nerve composed of the small branch a, and of another small branch sent from the second dorsal nerve, which is bestowed upon the subclavian muscle, and the teguments lying upon it, excepting only a slender branch b, which is sent to the serratus minor anticus muscle.

c. c. c. c. &c. The dorsal nerves, which are dispersed to the teguments of the thorax, the intercostal muscles, the levators of the ribs, the pectoral, serratus major, both the serrati postici, the cervicalis descendens of Diemerbroeck, the plura, the triangular muscle, and mediastinum.

d. d. d. d. &c. Small branches cut off, which the intercostal nerve sends to the dorsals.

e. e. e. e. &c. Other small branches cut off, which the dorsal nerves send to the intercostal.

f. f. f. f. &c. Twigs of the dorsal nerves, which are bestowed upon the levator muscles of the ribs, the cervicalis descendens of Diemerbroeck, and the longissimus dorsi.

g. g. g. g. &c. Branches sent off from the six inferior dorsal nerves, to the teguments upon the lower part of the thorax, and the containing parts of the abdomen.

h A branch of the last of the dorsal nerves, which is sent to the sacrolumbalis muscle.

FIGURE XIV.

This figure represents the distribution of the lumbar nerves, and is taken from Vieussens, Tab. 28.

A. A That portion of the spinal marrow, which is contained within the vertebræ of the loins.

a. a. a. &c. The gangliform plexuses of the lumbar nerves.

b. b. b. &c. Twigs of the lumbar nerves, which are spent upon the muscles of the back and loins, viz. the quadratus, longissimus dorsi, facer, and semispinatus.

c. c. c. &c. Small branches of the lumbar nerves, which are sent off to the intercostal.

B A branch of the last lumbar nerve cut off, which joins in with the first of the sacral, and terminates in the posterior crural nerve.

1 A small branch of the first lumbar nerve, which sends its twigs to the diaphragm, peritoneum, and the muscles of the abdomen.

2 The first lumbar nerve.

3 A small branch of the nerve 2, which is spent upon the transversalis muscle, and the two oblique.

5. 5 Four small branches of the nerve 2, which are sent to the teguments covering the os sacrum, the ilium, and coxendix.

6 A small branch of the nerve 2, which sends off some twigs to the peritoneum; and as soon as it has got to the spine of the ilium, it is bestowed upon the transverse and internal oblique muscle of the abdomen.

d Another small branch of the nerve 2, which after sending off the twigs * * to some of the muscles of the back and loins, viz. the quadratus, longissimus dorsi, facer, and semispinatus, it unites itself with the second of the lumbar nerves.

7 A twig of the second lumbar nerve, which climbs over the small branch d, and is bestowed upon the quadratus muscle.

8. 8 A small branch of the second lumbar nerve.

9 A twig of the small branch 8. 8, which towards the inner edge of the spine of the ilium, penetrates the internal oblique muscle of the abdomen, and terminates in it.

10 The division of the small branch 8. 8.

11 The internal portion of the division 10.

12 The external portion of the division 10, which is sent to the teguments covering the fore-part of the ilium.

13 The conjunction of the two above 11 and 12.

14 A twig of 11, and of the small branch 22, which, together with the twig 15, is inserted into the internal oblique muscle of the abdomen.

16. 16 Two twigs sent off from the same 11 and 22, to the oblique muscles of the abdomen.

e A twig of 11 and of the small branch 22 united, which is spent upon the inguinal glands, and the pectineus muscle.

17. 17 Another twig of the same, sent to the cremaster muscle, to the process of the peritonæum, and the coats of the spermatic vessels.

18. 18 A third twig of the same, which is distributed to the teguments on the upper part of the pubis.

19. 19 A fourth twig of the same, which terminates in the teguments of the groins.

20 A fifth twig of the same, spent upon the teguments of the pubis.

21. 21 A sixth twig of the same, which terminates in the scrotum.

22 A small branch of the second lumbar nerve, which unites itself with 11, above the inner spine of the os ilium.

23. 23 Another small branch of the same nerve, for the most part single, and sometimes having three origins, which after sending off the twigs 24. 24 to the psoas muscle, under which it runs, it winds round the iliac vessels, a little before they pass out of the abdomen, and is spent upon their coats, and likewise on the inguinal glands.

25. 25 Twigs, which the second lumbar nerve sends off to the psoas muscle.

26 Another small branch of the second lumbar nerve, which is inserted into the third. Here it must be observed, that the second lumbar nerve sometimes unites itself immediately with the third.

27. 27 Twigs, which the trunk of the second lumbar nerve sends off to the psoas muscle, in its course through that muscle.

28. 28 The trunk of the second lumbar nerve, going out from the last-mentioned muscle.

29 A twig of the second lumbar nerve, represented smaller than it naturally is in proportion to the others. It is distributed to the peritonæum, and the proper membranes of the psoas and internal iliac muscle.

30 The division of the second lumbar nerve.

31 The exterior branch of the division 30, which is represented somewhat smaller in proportion than it naturally is.

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32 The interior branch of the division 30.
 33 A twig of the branch 31, which, after sending off some fibres to the inguinal glands, is spent upon the peritonæum, and the rectus, pyramidalis, and internal oblique muscle of the abdomen.
 34 A very small twig of the branch 31, which is dispersed through the inguinal glands.
 35. 35 The remaining part of the branch 31, which enters the process of the peritonæum, and after sending off some twigs to the cremaster muscle, and to the sheaths of the spermatic vessels, is spent upon the coats of the testicles.
 36 A twig of the branch 32, which terminates in the peritonæum.
 37 The division of the branch 32 into three smaller ones.
 38 The upper small branch of the one 37, which is sent to the teguments upon the pubes.
 39 A twig of the middle small branch of the one 37, sent to the teguments upon the upper part of the pubes.
 40 The middle small branch of the one 37, which is bestowed upon the teguments of the penis.
 41 A twig of the lower small branch of the one 37, which is dispersed through the scrotum.
 42. 42 The remaining part of the lower small branch of the same 37, which after sending off a twig or two to the teguments upon the groins, terminates in the upper part of the perineum. Here it must be observed, that the trunk of the second lumbar nerve 28. 28, sometimes sends off a considerable branch, which is distributed to the glands in the groins, and upon the upper part of the thigh, and likewise to the teguments upon the fore-part of the thigh; and then the branch of the third lumbar nerve marked 53. 53, is either altogether wanting, or only very small.
 43 A branch of the third lumbar nerve.
 44 A twig of the branch 43, which is spent upon the psoas muscle.
 f. f The conjunction of the branches 43 and 66. 66. Here it must be remarked, that these two branches, which are always sent to the teguments on the external lateral part of the thigh, are sometimes found separated without the cavity of the abdomen.
 45 A twig of the united branches 43 and 66. 66, which is spent upon the sartorius muscle.
 46 Another twig of the same branches, which in the same manner as the last, is inserted into the head of the last-mentioned muscle, and terminates in it.
 47. 47 The division of the nerve made up of the above branches 43 and 66. 66.
 48 The exterior branch of 47. 47, the twigs of which terminate in the cellular membrane, and the skin upon the external lateral part of the thigh, excepting some which are spent upon the aponeurosis of the musculus membranofus, or fascialis of the tibia.
 g. g The extremities of the branch 48.
 49 The interior branch of 47. 47, the twigs of which running down as far as the knee, are bestowed upon the teguments on the external lateral part of the thigh.
 h. h The extremities of the branch 49.
 50. 51. 52 Three twigs of the third lumbar nerve, which are distributed to the psoas muscle.
 53. 53 A branch of the same third lumbar nerve, which is sometimes wanting, or at least very small, as was remarked above. Here it must be observed, that that branch is composed sometimes of two, sometimes of three, and sometimes of four others.
 54. 54 Two twigs of the branch 53. 53, which are spent upon the inguinal glands.
 55. 55 A twig of the branch 53. 53, which after sending off the fibres 56. 56 to the subinguinal glands, runs between the crural artery and vein, and is spent upon the coats of these vessels.
 57. 57 The division of the branch 53. 53, into three smaller branches.
 58 The interior branch of 57. 57, which after having sent off several little twigs in form of a small plexus to the subinguinal glands, is dispersed through the teguments upon the internal lateral part of the thigh.
 59. 59. 59 Conglobate glands, situated upon the upper and internal part of the thigh, whence they have the name of subinguinal. But these, as well as the others, are subinguinal; which upon account of their situation we have called the inguinal, and here they are represented much smaller in proportion, than they naturally are.
 60 The exterior branch of 57. 57, which passes under the anterior crural nerve, and immediately afterwards unites itself with the branch 61.
 61 The middle branch of 57. 57.
 62 A twig of the branch 61, which is spent upon the integuments.
 63 The division of the branch 61.
 64. 64 The exterior small branch of 63, which runs down as far as the knee-pan, and is distributed to the teguments upon the fore-part of the thigh.
 65. 65 The interior small branch of 63, which runs down as far as the former, and sends off its twigs to the teguments on the anterior and internal lateral part of the thigh.
 66 A branch of the third lumbar nerve, which for the most part unites itself with the branch 43, above the spine of the os ilium, and sometimes it is found separate from it.
 67 A small branch of the third lumbar nerve, which running downwards together with the others 68 and 69, and uniting with them forms the nerve 70.

68 Two small branches of the fourth lumbar nerve, which unite themselves with the one 67. It must however be observed, that the fourth lumbar nerve sometimes sends only one small branch to the one 67.
 69 A small branch of the fifth lumbar nerve, which unites itself with 67, in the same manner as the others 68.
 70 A nerve composed of the above small branches 67. 68 and 69.
 71 A twig, which the nerve 70 sends to the internal obturator of the thigh.
 i The division of the nerve 70.
 72 Two twigs, which the interior branch of i sends off to the external obturator muscle.
 73. 73 A twig of the exterior branch of i, which is sent to the gracilis posticus, or internus muscle.
 74 The exterior branch of i, which is spent upon the triceps muscle.
 75. 75 The interior branch of i, which sends off its twigs in which it terminates 76. 76, to the lower part of the triceps.
 77 The union of the third and fourth lumbar nerves.
 78 A twig of the fourth lumbar nerve, which terminates in the psoas muscle.
 79 The union of the fourth and fifth lumbar nerves.
 C. C The anterior crural nerve, which is composed of the lumbar nerves united together.
 80 A small twig of the anterior crural nerve, which is bestowed upon the internal iliac muscle.
 81 Another small twig of the same nerve, distributed to the psoas muscle.
 82 A small branch of the same, dispersed through the internal iliac muscle.
 83 Another small twig of the same, sent to the psoas muscle.
 84. 84 Two more twigs of the same nerve contiguous at their origin, spent upon the longissimus tibiæ, or sartorius muscle.
 D The division of the anterior crural nerve into four branches.
 85 The first and exterior branch of the division D.
 86 A twig of the branch 85, which is sent to the musculus rectus of the tibia, or the gracilis anticus.
 87 Another small twig of the branch 85, which after sending off some fibres to the abovesaid muscle of the tibia, enters the vastus internus muscle, and terminates in it.
 88 The second branch of the division D.
 89 The small superior twig of the branch 88, which is bestowed upon the fleshy part of the fascialis, or membranofus muscle.
 90 Another twig of the branch 88, which terminates in the vastus externus.
 91 A third twig of the branch 88, sent to the crureus muscle.
 92 A fourth twig of the branch 88, which is dispersed through the vastus internus muscle.
 93 The third branch of the division D, lying upon the fourth, to be described immediately.
 94 A nerve composed of three fibres of the branch 93 united together, which enters the cellular sheath of the crural artery, and after it has got out of it again, sends four branches 95. 95 to the teguments upon the inside of the thigh.
 96. 96 The trunk of the nerve 94, which runs down as far as the ham, and sends off its twigs to the inside of the thigh; excepting some which it gives to the vena saphenæ which it accompanies.
 97 A twig of the branch 93, which is inserted into the coats of the crural vessels.
 K. K The division of the branch 93, after it has sent off the nerve 94, and the twig 97.
 98. 98 The exterior branch of the division K. K, which enters the sartorius muscle, and terminates in it.
 99. 99. 99 The other branch of the division K. K, which runs down as far as the knee, giving off some twigs to the sartorius muscle, upon which it lies, and afterwards is spread upon the teguments on the inside of the thigh.
 100 The fourth branch of the division D.
 101 A twig of the branch 100, which enters the head of the vastus internus muscle, and terminates in it.
 102 Another twig of the branch 100, which is bestowed upon the same muscle.
 103 A branch of the same 100, which is dispersed through the vastus internus muscle. Here it must be observed, that the trunk of the branch 100, a little below the division D, enters the sheath of the crural artery, and as soon as it gets out again, is divided into two branches.
 104 The division of the branch 100.
 105 A branch of the division 104, which leaves the crural artery.
 106 A small branch of 105, which is spent upon the vastus internus muscle.
 107. 107 The trunk of 105, which after sending off the twig m to the vastus internus, terminates in the inferior tendon of the triceps muscle.
 108 A branch of 104, which accompanies the crural artery, and sends off the twigs 109. 109 to the longissimus tibiæ, or the sartorius muscle.
 110 The branch 108 leaving the crural artery, a little above the ham.
 111 A small branch of the one 108, which is sent to the teguments on the upper and fore-part of the leg.
 112 Another small branch of the same, which together with the former is sent to the teguments on the fore-part of the leg.
 113 A third small branch of the same 108, which is spent upon the teguments on the inside of the leg.
 114. 114 The division of the branch 108.
 115 The exterior branch of the division 114. 114.

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- 116 A small branch of 115, which unites itself with the one 119.
 117 A twig of the small branch 116, which terminates in the teguments near the calf of the leg.
 118 The trunk of 115, which is bestowed upon the teguments on the fore-part of the leg.
 119 The interior branch of the division 114. 114.
 120. 120 A small branch of 119, which bestows the twig 121, and the others in which it terminates, upon the teguments covering the inside of the leg.
 122 The union of the small branch 116 with the branch 119.
 123 A twig of the branch 119, which is bestowed upon the inside of the leg.
 124 The division of the trunk formed by 116 and 119.
 125 The exterior branch of the division 124.
 126 A twig of the branch 125, which, together with the twig 127, is bestowed upon the teguments on the fore-part of the leg.
 128 A small branch of 125, which, together with its twigs, is distributed to the teguments on the upper part of the tarsus or instep.
 129 Another small branch of 125, which, in the same manner as the former, is distributed to the teguments on the upper part of the instep, near the internal ankle.
 130 The interior branch of the division 124, whose twigs 131. 131. &c. are sent to the inside of the leg.
 132 The division of the branch 130.
 133 The interior small branch of 132, which, after having sent off several small twigs to the teguments upon the internal ankle, is inserted into the ligament which connects the bones of the tarsus together.
 134 The exterior small branch of 132, which leaves the vena saphena a little above the internal ankle.
 135. 135. 135 Slender twigs of the small branch 134, which are distributed to the teguments covering the internal ankle.
 136 More slender twigs of 134, which terminate in the teguments on the inside of the instep.

FIGURE XV.

This figure represents the nerves of the os sacrum, and is taken from Vieussens, Tab. 29.

- A. A The posterior surface of that portion of the medulla spinalis, which lies within the vertebræ of the os sacrum.
 B. B The trunk of the lowest lumbar nerve cut through, which unites itself with the lowest of the os sacrum, and together with it terminates in the posterior crural nerve.
 C. C The first nerve of the os sacrum.
 D. C The second.
 E. E The third.
 F. F The fourth.
 G. G The fifth.
 H. H The sixth, which is distributed to the teguments lying upon the os coccygis.
 I A production of the second, or of the first proper sheath of the medulla spinalis, which terminates in the coccyx.
 K. K. K Gangliform plexuses of the three first nerves of the os sacrum.
 * A branch of the intercostal nerve, which unites itself with the first of the os sacrum, and together with it terminates in the posterior crural.
 L The conjunction of the nerves B and C.
 1 A small branch of the united nerves B and C, which after going out of the cavity of the abdomen by the external fissure of the os ilium, is divided into two twigs.
 2. 2 The inferior twig of the small branch 1, which sends its fibres to the glutæus minor muscle.
 3. 3 The superior twig of the small branch 1, whose fibres are inserted into the glutæus medius.
 4 A small branch of the nerve D, which after going out of the abdomen by the external fissure of the os ilium, is divided into two twigs; the inferior of which 5. 5, enters the glutæus medius muscle, and terminates in it, while the superior 6. 6 is dispersed through the glutæus major.
 M. M The posterior crural nerve, which is composed of the nerves B. C. D and E united, and lies upon the internal surface of the os sacrum; whence happens that numbness of the thigh, for most part attended with a pain in the loins, in women with child, and when the belly is costive.
 7. 7 A twig going from the gangliform plexus of the nerve E, which unites itself with the nerve F.
 8. 8 A small branch of the nerve E, which after sending off the small twigs 9. 9 to the external iliac, or the pyriform muscle, terminates in the posterior crural nerve.
 N A small branch of the nerve E, which sends off the twig 10 to the above pyriform muscle, then unites itself with the nerve F, and at last terminates in the posterior crural nerve.
 11. 11 Two twigs of the nerve F, the fibres of which are spread upon the rectum.
 12. 12 A small branch of the nerve F, which is spent partly upon the rectum, partly upon the sphincter and levator muscles of the anus, and partly upon the glutæus major of the thigh.
 13 The trunk of the nerve F, which unites itself with the branch 20.

- 14 The division of the trunk 13 into two small branches, which go to the teguments on the perinæum, and send off the small twigs 15. 15. &c. both to the common and proper coats of the testicles.
 16. 16. 16 Twigs of the fifth nerve of the os sacrum, which are bestowed upon the rectum and its levator muscles.
 17. 17 Small twigs of the same fifth nerve of the os sacrum, which terminate in the sphincter ani, and the neighbouring membranes.
 18 The sixth, or last nerve of the os sacrum, the twigs of which are distributed to the teguments covering the coccyx, as was observed above.
 19. 19 A branch going from the posterior crural nerve, which is spent upon the internal iliac, and internal obturator muscle.
 20 A branch composed of united twigs from B and C, going out from the posterior crural nerve.
 21. 21. 21 Twigs of the branch 20, which is sent to the teguments about the perinæum.
 22 A twig of the same branch 20, which is spent upon the erector muscle of the penis.
 23 Another twig of the same, sent to the accelerator muscle of the penis.
 24 The last twigs of the same branch 20, which, together with the five above them, are dispersed through the corpus nervosum penis, and through the glands.
 25 A branch, arising from the posterior crural nerve, whose twigs 26. 26 are bestowed upon the two smallest of the quadrigemini muscles.
 27 The last small twigs of the branch 25, which terminate in the quadrigeminus muscle, called the quadratus.
 28 A branch composed of some fibres of the nerve D, going out from the posterior crural nerve.
 29. 29. 29 Twigs of the branch 28, dispersed through the glutæus major, excepting some small fibres which terminate in the skin.
 30 Here the branch 28, receives a twig which is sent off from the posterior crural nerve.
 31. 31 A branch of the one 30, which is bestowed partly upon the perinæum, and partly upon the scrotum.
 32. 32 Another branch of the same, which divides into two smaller ones, sent to the teguments upon the hind part of the thigh.
 O. O The posterior crural nerve, which near the ham is divided into two considerable branches. Observe, that sometimes towards the upper part, and sometimes towards the middle of the thigh, this nerve appears to be double.
 35. 35 A small branch of the posterior crural nerve, which is sent to that portion of the biceps muscle of the thigh, which arises from the tuberosity of the os ischium.
 36 A branch of the posterior crural nerve, which at its origin seems sometimes divided into three packets.
 37 A twig of the branch 36, which terminates in the inferior and longer portion of the triceps.
 38. 38 A small twig of the same 36, distributed to the feminovosus muscle.
 39. 39 Another twig of the same branch 36, dispersed through the femimembranosus muscle.
 40 A branch of the posterior crural nerve, which sends off the twig 41. 41, to the fleshy portion of the biceps of the thigh.
 42 Small twigs of the branch 40, which terminate in the panniculus carnosus of the thigh.
 43 Small fibres of the branch 40, which are spread upon the membranes covering the external and inferior tuberosity of the os femoris.
 44. 44 The last small twigs of the branch 40, which are inserted partly into the membranes in the neighbourhood of the rotula, and partly into the ligaments which connect that bone with those of the thigh and leg.
 P The division of the posterior crural nerve into two remarkable branches, marked Q and R.
 Q The exterior and smaller branch of the division P.
 R The interior and larger branch of the same division P.
 45 A small twig of the branch Q, which is dispersed through the membranes lying upon the upper part of the fibula.
 46 Another twig of the branch Q, which is spent upon the teguments on the outside of the leg. Observe, that this twig towards its origin is sometimes divided into two smaller ones, and these small ones subdivide into smaller and smaller fibres.
 47. 47 The last small twigs of the branch Q, which terminate in the teguments on the external ankle.
 48 A small twig of the branch Q, which are spent partly upon the teguments on the upper part of the fibula, and partly upon the popliteus muscle.
 49. 49 Another small twig of the branch Q, which is bestowed upon the peronæus anticus muscle.
 50 The continuation of the branch Q.
 51. 51 The division of the above 50 into two small branches, the lesser of which 52, terminates in the peronæus anticus muscle, and the larger one 53. 53, is inserted into the peronæus posticus.
 54. 54 A twig of the branch Q, which is spent upon the peronæus anticus muscle.
 55 Another twig of the branch Q, whose fibres 56, terminate in the tibialis anticus muscle, and those 57, in the long extensor of the toes.
 S. S The division of the branch Q.
 T The larger branch of the division S. S.
 58. 58 A twig of the branch T, which terminates in the tibialis anticus muscle.

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u. u The division of the branch T.
 59 A small branch of the one u. u.
 60 A twig of the small branch 59, which is distributed to the long extensor of the toes.
 61 Another twig of the small branch 59, which terminates in the cellular membrane under the skin.
 62. 62 More twigs of the small branch 59, which are spent upon the teguments on the instep.
 63. 63 Another small twig of the branch 59, the fibres of which are distributed to the membranes upon the tarsus, and the interosseous muscles of the toes.
 64. 64. 64 More small twigs of the same 59, which are bestowed upon the teguments on the inside of the metatarsus.
 65. 65 The last slender fibres of the small branch 59, which are sent to the teguments on the upper part of the great toe.
 66. 66 The other small branch of the division u. u, which passes through the long extensor muscle of the toes.
 67. 67 Two slender twigs of the small branch 66. 66, which are spent upon the extensor muscle of the great toe.
 68 A slender twig of the same small branch 66. 66, which, together with 67. 67, terminates in the extensor muscle of the great toe.
 69 Another slender twig of the same 66. 66, which is dispersed through the tibialis anticus muscle.
 70. 70 The division of the small branch 66. 66.
 71 A small nervous twig, by means of which the two branches 70. 70, communicate with one another.
 72. 72 The conjunction of the two branches 70. 70.
 73. 73 The second division of the small branch 66. 66.
 74. 74 The exterior branch of the division 73. 73, which bestows its twigs upon the short extensor of the fingers, the membranes of the tarsus, and the interosseous muscles.
 75. 75 The middle branch of the division 73. 73, which after having passed under the annular ligament of the tarsus, together with the other branches of the same division, is divided into two smaller ones, which are dispersed through the membranes upon the tarsus and metatarsus, and likewise the interosseous muscles.
 76. 76 The interior and largest branch of 73. 73.
 77 A twig of 76. 76, which is spent upon the teguments of the metatarsus.
 78. 78 The division of the branch 76. 76 into two smaller ones.
 79. 79 The interior branch of 78. 78, which is bestowed upon the upper and lateral part of the great toe, next the second toe.
 80. 80 The exterior branch of 78. 78, which is spread upon the upper and lateral part of the second toe, next the great toe.
 X. X The smaller branch of the division S. S.
 81 A twig of the branch X. X, which is inserted into the peronæus anticus muscle.
 82. 82 Another twig of the branch X. X, which is dispersed through the peronæus posticus muscle.
 83 The continuation of X. X, which lying upon the peronæus posticus, and adhering to it, runs downwards, and forwards a little above the external ankle.
 84. 84. 84 More twigs of X. X, which are inserted into the teguments upon the external ankle.
 85. 85 Gangliform plexuses, which the branch X. X sometimes forms towards the fore-part of the leg, a little above the ankles.
 86. 86 Twigs going out from the above plexuses, to be bestowed upon the teguments.
 87 The division of the branch X. X.
 88 The interior branch of the division 87, which sends off twigs here and there to the teguments of the tarsus and metatarsus.
 89. 89 The division of the branch 88 into two smaller ones.
 90. 90 A branch of the division 89. 89, which is dispersed upon the upper and lateral part of the second toe, next the third toe.
 91. 91 Another branch of the division 89. 89, sent to the upper and lateral part of the third toe, next the second.
 92 The exterior branch of the division 87.
 93. 93 A twig of the branch 92, which is spent upon the short extensor of the toes.
 94. 94 Twigs of the branch 92, which, together with four of its fibres which are not marked, are inserted into the teguments of the tarsus and metatarsus.
 95 The division of the branch 92 into two smaller ones.
 96 A branch of the division 95, of which the twig 97. 97, together with its fibres, is distributed to the upper and lateral part of the third toe, next to the fourth toe; while the twig 98. 98, is bestowed upon the upper and lateral part of the fourth toe, next to the third.
 99 The other branch of the division 95. 95, of which the twig 100, is sent to the upper and lateral part of the fourth toe, next the little toe; while the twig 101, is dispersed upon the upper and lateral part of the little toe, next the fourth.
 102 A twig of the branch R, which is inserted into the plantaris muscle.
 103 Another twig of the branch R, sent to the popliteus muscle, and the neighbouring membranes.
 104 A third twig of the branch R, which enters the interior head of the gastrocnemius muscle, and is dispersed through it.

105 A considerable branch of the one R.
 106 The division of the branch 105 into three smaller ones.
 107 A branch of 106, which enters the inner head of the gastrocnemius muscle, and is distributed through it.
 108 The middle branch of 106, which is spent upon the soleus muscle.
 109 The largest branch of 106, which is divided into two smaller ones; of which the one marked 110. 110, is sent to the teguments upon the outside of the calf of the leg, and runs down to the extremity of the tendo Achillis.
 111 A small branch of the one 109, which, together with 110. 110, is bestowed upon the teguments on the outside of the calf of the leg. Here it must be observed, that this small branch is very frequently wanting, and then its place is supplied by another resembling it, which is sent off from the branch Q of the division P, and receives some twigs from the branch R. Besides, this nerve is sometimes sent to the upper part of the little toe, and of the one next to it, and likewise sends off one twig to the third; and then the branch X. X going down to the tarsus and metatarsus, is bestowed entirely upon the teguments, and scarce reaches as far as the toes; but this seldom happens.
 112 A twig of the small branch 111, which is spent upon the teguments on the external ankle.
 113. 113. 113 Twigs of the small branch 111, which are bestowed partly upon the teguments on the outside of the ankle, and partly upon the fungous fleshy mass which fills up the sole of the foot.
 114. 114 More twigs of the small branch 111, which are spent upon the teguments of the foot.
 115 More twigs of the same 111, which are distributed partly to the teguments of the foot, and partly to the abductor muscle of the little toe.
 116 Another twig of the same 111, which terminates in the teguments of the metatarsus.
 117. 117 The last slender fibres of the small branch 111, which together with the twig 101, are sent to the upper part of the little toe.
 118 A large twig of the branch R, which sends off the smaller ones 119 and 120. 120, to the membranes covering the head of the tibialis posticus muscle.
 121. 121 Another large twig of the branch R, which is dispersed through the same muscle.
 122 A smaller twig of the branch R, which enters the belly of the soleus muscle, and is dispersed through it.
 123 Another small twig of the branch R, which is inserted into the coats of the vessels near the calf of the leg.
 124 A larger twig of the branch R, which is bestowed upon the long extensor of the toes.
 125 A small twig of the branch R, which terminates in the flexor muscle of the great toe.
 126 Another small twig of the branch R, which is spent upon the tibialis posticus muscle.
 Y. Y The continuation of the branch R, which runs downwards under the gastrocnemius and soleus muscles.
 Z The branch R cut through. The distribution of what remains of it, you may see in the next figure.

FIGURE XVI.

This figure represents the distribution of the nerve which supplies the sole of the foot, and is taken from Vieussens, Tab. 30.

A The continuation of the branch R of the former figure, cut through here as well as in that figure.
 1. 1. 1 Three twigs of the branch A, which are distributed partly to the teguments on the inside of the ankle, and partly to the fleshy fungous mass which fills up the sole of the foot.
 2. 2 A twig of the same, which is likewise sent to the teguments on the inside of the ankle, excepting some fibres which are distributed to the fleshy mass just now mentioned.
 B The division of the branch a into two smaller ones.
 C. C The interior branch of the division B.
 3. 3. 3 Small twigs of the branch C. C, which terminate in the neighbouring membranes.
 4 A small twig of the branch C. C, which enters the middle of the belly of the short flexor of the toes, and is dispersed through it.
 D The division of the branch C. C.
 E A branch of the division D.
 5 A twig of the branch E, which after sending off the fibres 6. 6. 6 to the short flexor of the toes, unites itself again with the same branch E, from which it was sent off.
 7. 7. 7. 7. &c. Small twigs of the branch E, which terminate partly in the first interosseous muscle of the great toe, and partly in the abductor muscle of the same.
 8. 8 Here the branch E receives the twig which it had before sent off.
 9. 9. 9. 9 The last small twigs of the branch E, which are bestowed upon the lower and lateral part of the great toe.
 F The other branch of the division D.
 G The division of the branch F.
 H A branch of the division G.
 10. 10. 10 Small twigs of the branch H, which are spent upon the lumbrical muscles, and the fleshy mass which is contiguous, and adhering to them.

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I The division of the branch H into two smaller ones.

11 A branch of the division I, which is sent to the lower and lateral part of the great toe, next the second toe.

12 The other branch of the division I, which is bestowed upon the lower and lateral part of the second toe, next the great toe.

K The other branch of the division G.

L The division of the branch K.

13. 13 Two small nervous fibres, which are sent to the neighbouring membranes.

M. M A branch of the division L.

N. N The division of the branch M. M into two smaller ones, of which the one 14, is sent to the lower and lateral part of the second toe, next the third; and the other 15, is sent to the lower and lateral part of the third toe, next the second.

O. O The other branch of the division L.

P. P The division of the branch O. O into two smaller ones, of which the one 16, is spread upon the lower and lateral part of the third toe, next the fourth; and the other 17, upon the lower and lateral part of the fourth toe, next the third.

Q The exterior branch of the division B.

18 A twig of the branch Q, which is inserted partly into the neighbouring membranes, and partly into the fleshy mass which arises from the os calcis, and by some anatomists is taken for a muscle; the tendinous part of which unites itself with the tendons of the short flexor muscle of the toes.

19 A twig of the branch Q, which enters the short flexor muscle of the toes, and terminates in it.

20. 20 Two twigs of the branch Q, inserted into the fleshy mass which arises from the heel, and sends off slips to the lumbricales muscles.

21 A twig of the branch Q, which is distributed to the above fleshy mass, and likewise to that which fills up the sole of the foot.

22 Another twig of the branch Q, which is dispersed through the above-said fleshy mass, lying under the tarsus and the metatarsus.

R A branch of the one Q, which is spent upon the lumbricales, the adductors of the great toe, and the interosseous muscles; excepting those twigs 23. 23, which are sent to the transversalis pedis, or the adductor of the little toe, and to that part of the fleshy mass which is situated near the little toe.

S. S The division of the branch Q.

T The interior branch of the division S. S, which, after sending off the three twigs 24. 24. 24, to the lumbricales and interosseous muscles, is divided into two smaller branches; one of which 25, is distributed to the lower and lateral part of the fourth toe, next the little toe; and the other 26, to the same parts of the little toe, next the fourth.

V The exterior branch of the division S. S.

27. 27 Two twigs of the branch V, which are spent upon the lumbricales and interosseous muscles, and likewise upon the integuments.

28. 28 Two other twigs of the branch V, which are bestowed upon the external part of the fleshy mass upon the sole of the foot.

29. 29 Two more twigs of the branch V, which are inserted into the abductor muscle of the little toe.

30 The last small twigs of the branch V, which, together with the branch 26, are sent to the lower part of the little toe. Here it must be observed, that the most part of the twigs of the branch V, have a small gangliform plexus.

F I N I S.



